Lot No.

585 BOLENDER, M.H. **The United States Silver Dollar from 1794 to 1803.** Freeport, 1950. 75 pages, 9 fine plates. Large quarto. Original blue cloth, gilt, trifle discolored else fine. Errata slip, 1950 and 1956 valuation lists laid in. (75.00)

586 BROWNING, A(RD) W. **The Early Quarter Dollars of the United States, 1796-1838. With a Few Remarks Concerning Their Types, Varieties and Rarity. Illustrated on Eight Photographic Plates.** (New York, John J. Ford, Jr., 1950). 36 pages, 8 photographic plates. 24 x 17 cm. Crimson cloth, gilt. Fine. (375.00)

One of twenty to twenty five copies comprised of the original 1925 text and photographic plates taken from the original glass negatives. Put together in late 1950 by John J. Ford, Jr. At the same time, five deluxe copies were produced, interleaved and bound in simulated leather with marbled paper sides. The plates are actually superior to the 100 copies printed in 1925 by Wayte Raymond. This issue is distinguishable from the 1925 edition by the sanserif gilt lettering, the square-back spine, and the text which does not extend to the foredges of the plates.

587 BROWNING, A(RD) W. **The Early Quarter Dollars of the United States, 1796-1838. With a Few Remarks Concerning Their Types, Varieties and Rarity. Illustrated on Eight Photographic Plates.** (New York, John J. Ford, Jr., 1950). 36 pages, 8 photographic plates, interleaved throughout. 24½ x 18 cm. Crimson half morocco-grained cloth, spine lettered in gilt, marbled sides and endpapers. Fine. (750.00)

One of only five deluxe copies of the entire Ford issue of twenty five to thirty copies.

588 BURNIE, R.H. **Small California and Territorial Gold Coins. Quarter Dollars, Half Dollars, Dollars.** Pascagoula, 1955. (8), vii, (3), 96 pages. 4to. Original black leather grained card covers. (45.00)

589 CLIFFORD, HENRY H., Editor. **The Westerners Brand Book, Book Nine. A Group of Nine Original Articles Pertaining to the History of the West, Including Pioneer Journals and Memoirs Never Before Published.** Los Angeles, 1961. 267, (1) pages, well illustrated. 4to, 26 x 21 cm. Green cloth, gilt, dust jacket. Fine. (75.00)

The first appearance of Clifford's important work on pioneer gold coinage. One of only 550 copies printed.

590 CROSS, IRA B. **Financing an Empire: History of Banking in California.** Chicago, 1927. Four volumes. xii, 1002, 531, 448 pages, illustrated. 4to, 27 x 19½ cm. Deluxe pictorial cloth, stamped in blind, white and gilt, top edges gilt. Fine set. (300.00)

Clain-Stefanelli 3439. Scarce. Volume I includes important notes on pioneer gold.

591 FORD, JOHN J., JR. **The Franklin Hoard of United States Assay Office of Gold Coins. An Answer to Eric P. Newman.** (New York), 1967. (5), 113, (40) leaves, including enlarged illustrations, handrawn, of the obverse and reverse of the 1853 $20 United States Assay Office of Gold coin, and photographic reproductions of correspondence. 29 x 23 cm. Clothbacked card covers. (250.00)

Went for $2000
to John Adams
after a bidding
WAR with Ron
Gillio!

From the Craige library. The complete body of correspondence concerning this controversy, including photographic copies of the August, 1966 Eric P. Newman Numismatic Education Society report which prompted Ford's response, the text of Newman's talk, "Perfection in Forgery", given at the 1967 convention of the International Numismatic Congress, and Ted Craige's carbon copy of his letter and documentation, which is reproduced in the Ford work.

592 LEE, ED M. **California Gold Quarters-Halves-Dollars. A descriptive list of privately issued, interesting and historical coins of small denominations.** Glendale, 1932. 94 pages, 1 plate of coins. 22 x 15 cm. Original blue leatherette, gilt. Fine. (100.00)

593 McILVAINE, ARTHUR D. **The Silver Dollars of the United States of America.** New York, American Numismatic Society, 1941. Numismatic Notes and Monographs No. 95. 35 pages, 6 fine plates. 16mo. Tan card covers. Fine. (25.00)

1983 CONVENTION OF INTERNATIONAL NUMISMATICS

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_____. *American counters, part 1: double eagle & eagle gold.* Menlo Park, 1983. 100 pp., ill.

This volume, a companion to the above and the only part published so far, deals with the counters of double eagle and eagle size, including some that look an awful lot like California gold coins. This book is a bit easier on the pocketbook at around $10.

Ford, John J., Jr. *The Franklin hoard of United States Assay Office of Gold Coins: an answer to Eric P. Newman.* New York, 1967. 113 pp., hand drawn illustrations.

As stated in the introduction to this bibliography, I have tried to stay away from works that were not actually published and offered for sale to the public. This collection of correspondence and drawings falls dangerously close to that category, but as it is of controversial subject matter, registered in the Library of Congress, and written by one of our generation's most brilliant numismatists, it was thought best to include it here. The only copy which has appeared at auction was in Kolbe's sale of the Ted Craig library, August 13, 1983. The work includes correspondence about the questionable hoard pieces and the text of Eric Newman's 1966 speech, "Perfection in forgery". The Craig copy, presumably one of a very small number, brought $2500 on an estimate of ten percent of that amount. If another copy should come up for auction, expect strong interest in it!

Frey, Albert R. *Dictionary of numismatic names with a glossary of numismatic terms in English, French, German, Italian, Swedish.* New York, 1947.

Originally published in *The American journal of numismatics* in 1917, this is one of the best numismatic dictionaries ever written in the English language, probably ranking just behind the more recent book by Richard Doty described above. This book belongs in the library of every collector, and even advanced numismatists will find themselves consulting it frequently. Scarce. Copies generally sell for over $100.

Gilbert, James Henry. *Trade and currency in early Oregon: a study in the commercial and monetary history of the Pacific northwest.* New York, 1907. 126 pp., one graph.

Although this is an early work, predating the all-important Adams title described above, the historical details presented are of uniformly high quality. Important information on Oregon (especially) and California pioneer gold pieces is presented, along with a wide variety of data on commercial practices of the era. A fantastic reference. Scarce. Copies appear only infrequently at auction and have sold for around $80.

Gould, Maurice. *Merchant counterstamps on American silver coins.* Wayland: Ovolon Publishing, 1962. 16 pp., ill.

Although this book has been largely superseded by the Gregory Brunk publication described above, the work is still of interest and obtainable for around $10.

BE.

Do you remember this? It's now listed as a piece of literature.

EPN

ANACS-E-5759-B

1853 900 fine $20 U.S. Assay Office.
33.50 grams. (517.0 grains) Sp. gr. 17.8.

This piece was No. 6 in a group of about 20 similar pieces studied by us about 15 years ago. It is distinguished from all other known pieces by having in the obverse field equally spaced and close spiral tool marks on all except the left side. In our opinion this concentric appearing group of circular lines resulted from the use of an automatic cross cutting tool when a lathe was used to cut off the end of a steel rod being prepared as part of the forgery process. The steel rod was to be used as a false hub or false die to be made by a pressure transfer process. The tool marks in our opinion did not result from the preparation in a lathe of the gold planchet on which the coin was struck.

The submitted piece is one of the coins in a socalled "hoard" found in recent years and has been studied by many people. One piece from the hoard with a glittering surface was the subject of an arbitration under PNG auspices and litigation in Cook County, Illinois. The arbitration panel unanimously determined that the coin was not a proof and the court sustained the decision of the arbitrators. The arbitration panel was about to give an opinion on whether that coin was or was not genuine but did not file any opinion on that issue. Neither PNG nor members of the arbitration panel have been willing to make any of the official files available for review by appropriate persons and should be requested to do so by ANACS either under the Code of Ethics or otherwise. We have been denied the right to examine certain parts of these files after many requests. We have learned additional facts and have come to further conclusions subsequent to the original opinion given in that arbitration.

We have concluded that the original pair of dies for the 1853 $20 U. S. Assay Office 900 fine were improperly removed from and not returned to the U. S. Mint in Philadelphia sometime after 1912. These dies were not used by the person who took them. Transfer hubs and transfer dies were secretly and privately made at a much later date from the original dies. There was polishing and tooling on the hubs and on the dies and a few coins were struck in various stages of the completion of polishing and tooling of the dies. Others were struck after completion. There was a new collar prepared in a broaching machine with 179 reeds on the edge, the normal collar having 170 reeds. One of the false dies was cut into parts to produce other related gold and lead numismatic items. Although the Red Book has properly delisted related items there has been a general fear of and spinelessness toward bringing the facts into the open. This attitude is not limited to a few people but to several large numismatic organizations and many individuals. It could also have many economic reverberations if the facts were available.

The submitted piece has a ball shaped raised die break on top of the first A of ASSAY. This developed in the late stages of the use of the original die, but is not found on some of the other related pieces as it was ground off of the forged transfer hub. A similar raised oval die break between the top parts of SS in ASSAY also can be noticed on the submitted piece.

There is an identifying nick which appears on the obverse as a line dent rising to the right on the upper part of the I in UNITED. This nick is not an accident to the coin but is in the false die. Similarly there is a diagonal nick in the lower text panel line of the reverse below the right side of the F in CALIFORNIA. This is also a characteristic of the false die and not an accident to the coin.

The normal die break lump on the right side of the T in UNITED on the reverse is present along with the breaks connecting the L of GOLD with letters above and below.

The surface of the submitted piece is mildly shiny but much duller than the pieces with a glittering surface.

This submitted piece is the most important link in a modern forgery saga in our opinion and should be retained by ANACS, if at all possible for instruction purposes. In our opinion it is a most dangerous forgery and as such an outstanding example of the efforts which have been taken to deceive numismatists.

Much additional data and research are available from us if the matter is to be further studied.

Eric P. Newman

for

October 24, 1978 ERIC P. NEWMAN NUMISMATIC EDUCATION SOCIETY

ERIC P. NEWMAN NUMISMATIC EDUCATION SOCIETY

6450 Cecil Avenue, St. Louis, Missouri 63105

REGISTERED MAIL

August 8, 1984

ANACS
818 North Cascade Avenue
Colorado Springs, CO 80903

Gentlemen:

The gold ingot submitted to us for opinion is your E-5752-E. On one side it has a panel bearing the four line legend "United States Assay Office of Gold San Francisco California 1853" and the large incuse numbers reading 2 - 17 - 53. On the other side is a panel bearing the legend "A. Humbert U. S. Assayer" and large incuse numbers reading "998". The weight is 28.5274 grams and the specific gravity is 19.324888. The submitted piece has no value or weight stamped upon it. Its two faces have a gently convex top and bottom and its sides are slightly concave. It is about 21 mm. from top to bottom and about 35 mm. from side to side. Its general thickness is about 2 mm. It has no abrasions or wear from use or handling. It is bright and of uniform golden color. We assume the 2 - 17 - 53 is intended to be February 17, 1853 and we assume 998 is intended to be fineness. There is no die break evident in the four line panel. We have examined this style of ingot in the Bank of California collection and are aware of auction catalogs and other written material listing similar and related items. We have studied and given testimony on 1853 $20 U. S. Assay gold coins.

The submission of this ingot to us for an opinion has made it desirable to review past and study recent research on the subject of similar U. S. Assay Office private gold items and related matters.

We have already on file at ANACS a detailed opinion dated October 28, 1978 that an 1853 U. S. Assay Office $20 gold coin designated as E-5759-B is a forgery. A copy of that opinion is attached to this letter. The submitted ingot contains the same panel design and four line legend as that coin has as part of its reverse design.

In 1981 there was published a long researched book on U. S. private gold pieces written by Donald H. Kagin. It does not seem to clear up matters involving the above $20 coin and the submitted ingot, but certain material in that book will be commented upon in connection with our conclusion.

The four line 1853 U. S. Assay Office panel legend is used alone on the U. S. Assay discs Kagin #20, 21(c), 21(d) and 21(e) illustrated on pages 274 and 275 and on ingot #23 on page 276. The A. Humbert two line panel legend is used on the U. S. Assay ingot #23 on page 276 and also used double struck on Argenti #1 on page 278. Incuse numbers of the size used on the submitted ingot are found in various combinations on Kagin #21, 21(a), 21(b), 21(c), 21(d), 21(e), 23 and 24 on pages 274, 275, 331 and 332.

It is of great interest that a group of pieces listed in the Kagin book were entirely unknown to Edgar H. Adams who researched extensively and wrote his publication on the subject in 1912-1913. That group were also unknown before 1958. The Kagin book stated on Page 274 without source or any detail that some of these pieces "were found in Arizona". Some of the group of pieces were listed in the 1963 Red Book but were eliminated the next year and thereafter. One piece was even pictured in the Encyclopaedia Britannica and thereafter removed. Taxay listed some items and many auction sale catalogs have done so.

Kagin has several comments about Stephen K. Nagy (1883-1958) of Philadelphia, who was member #763 of the A.N.A. from 1905 to 1916. Kagin spells Nagy's first name as "Steven" in most instances and does not include Nagy in the index of the book.

In describing the regular Massachusetts and California Company items on page 292 Kagin stated "Several spurious concoctions exist." This was supplemented on page 342 under modern strikings, patterns and trials and referring to the same series with the explanation, "The following two types are 20th Century Concoctions".

Nagy is stated by Kagin on page 237 to have obtained "several pairs of private dies of Massachusetts and California companies and created a number of fantasy coins to sell to collectors." Since "companies" is plural and not capitalized and there is an "and" instead of &, the expression was apparently intended to have a broader meaning than a reference to Massachusetts & California Co. only. This is supported (a) on page 326 by Kagin's statement that Nagy probably had used an 1851 panel punch to make the multistruck U. S. Assay Office silver bar described as item #6; (b) on pages 376-377 that the silver, copper and lead uniface reverse strikes of the 1852 U. S. Assay Office $20 size were "Made by Steven Nagy of Philadelphia circa 1908-12"; and (c) on page 378 that Nagy purchased Templeton Reid dies from John Haseltine and used them to make impressions.

The conclusion to be drawn from the above is that Stephen K. Nagy had obtained and used various private gold dies and at least one punch to make unauthorized twentieth century fantasies. We learned about 20 years ago that certain private gold dies which were at the U. S Mint about 1912 were missing, that when Nagy died in 1958 he had possession of a large quantity of items formerly belonging to the U. S. Mint and that these quietly changed ownership from the Nagy estate.

On page 382 Kagin has a heading, CONTEMPORARY COUNTERFEITS AND FILING OF PRIVATE GOLD COINS. By contemporary he means counterfeits made to circulate along with genuine ones. He mentions no such counterfeits of private gold coins there and only alludes to filed or altered pieces and counterfeits of U. S. standard or national gold pieces.

Kagin also comments under CONTEMPORARY COUNTERFEITS AND REPLICAS on page 383:

"There has been no comprehensive study of which private gold coins have been counterfeited recently. With the help of the American Numismatic Association Certification Service, however, I have attempted to list at least some of the known pieces which have been counterfeited. It is suggested that anyone who doubts the genuineness of a private gold coin send it to the ANACS in Colorado Springs, Colorado."

He then lists only 3 Bechtlercounterfeit items, followed by MODERN COUNTERFEITS of private gold on page 384 with the comment "Most are cast" but gives little distinguishing detail except that they are made of a metal other than gold in some instances.

The submitted ingot is not included in Kagin's book because on page 248 he specifically excluded bars or ingots which have no values marked upon them.

This letter of ours should not be construed to be a criticism of certain portions of Kagin's book as we merely are pointing out certain insufficiencies. This subject is very complex and controversial and Kagin has added quantities of important data. We wrote Kagin during the time he was preparing the manuscript for his book to include facts from the extended arbitration hearing and written arbitrators' decision in favor of Garland in the case of Garland vs. Ryan conducted by the Professional Numismatists Guild involving an 1853 $20 U. S. Assay Office coin and the judgment in favor of Garland by the Cook County, Illinois Circuit Court thereafter. Kagin did not include any such material or request any such material from us.

The evidence and findings of fact in that arbitration have not been made public and should be at least filed with ANACS, since a portion has recently been sold at a Kolbe numismatic literature public auction and other portions have lost their unjustified secrecy. All the material still exists in the hands of one or more of the three arbitrators.

The conclusions on the submitted piece are now much easier to justify and explain. It is our opinion that an assortment of dies, lettered punches, hubs, and a large set of various sized letter and figure punches were obtained by Nagy from the U. S. Mint. He made some fantasy items for collectors which were known before 1958. After his death these punches, hubs and dies were obtained by others who used them and transfer hubs from them to make a large group of interrelated and some unrelated fantasy private gold pieces. The alleged secretive finding of many of these pieces in Arizona is a fiction in our opinion. The workmanship and metallurgy of this modern crop of fantasies is superb; the conceptual planning is truly a great imaginative achievement; and the effect on the science and hobby of numismatics is a disgusting tragedy.

Whatever opinions in the past ANACS has given to those submitting similar pieces, we do not know, as our opinion may have been a minority view or considered an insufficiently convincing view.

In our opinion, the submitted ingot is made circa 1960 by using at least one original 1853 panel punch or hub formerly at the U. S. Mint or a transfer punch or hub made from an 1853 die formerly at the U. S. Mint and containing that design. Its incuse numbers are added from number punches formerly owned by the U. S. Mint. The Humbert punch or hub had the same source. The gold from early San Francisco Mint U. S. coinage was probably further refined and used for the ingots so that trace elements are normal, but no content analysis has been made.

The submitted ingot is clearly a circa 1960 forgery in our opinion.

We have wondered for a long time when a piece of this type would be submitted for an opinion and we are glad to be able to see that the Kagin book on the subject refers authenticity of such pieces to ANACS. If any of you at ANACS feel our opinion should be clarified, modified or supplemented, we welcome your suggestions and will try to make it more meaningful. We have much more data which could be presented if the need arises. We request a picture of each face of the ingot to be attached to this letter and another set or so for our file.

We return the ingot herewith.

We hope we have been helpful even if this is the longest consultant's opinion you have received or will probably ever receive.

Very truly yours,

Eric P. Newman, President

jah

Encl.

The stars on altered pieces are punched in and many times show nothing but uninterrupted metal, with no lines whatsoever. Other times, circular lines may be present in the altered star.

Overall, look for well-defined die polish and appropriate luster. Sharpness in the letters and digits is not as useful for authentication in the commemorative series as it is for regular-issue coinage, due to the roundness typically found in these features on genuine commemorative coins.

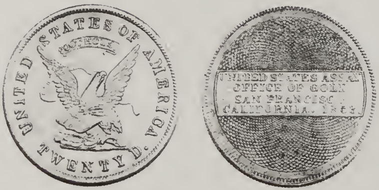
Territorials

Surprisingly little U.S. territorial gold coinage has been forged. Besides the common replicas of the California fractional gold series, counterfeits are limited primarily to the United States Assay Office of Gold issues of 1852 and 1853. The most common of these is the 1853 Assay twenty-dollar coin.

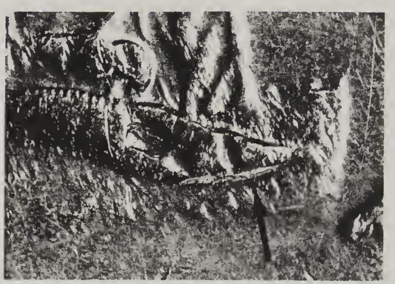
This counterfeit piece is prooflike in appearance and rounded in its details, and exhibits several depressions that repeat from fake to fake. The genuine Assay issues have sharp details and a great deal of die flow in the fields, and are well-defined pieces.

On the counterfeit, look for a repeating depression on the base of the branch being held by the eagle. This depression, which looks like a bag mark, is a key counterfeit diagnostic. Also, a repeating depression is seen in the field between the legend and the banner on this issue.

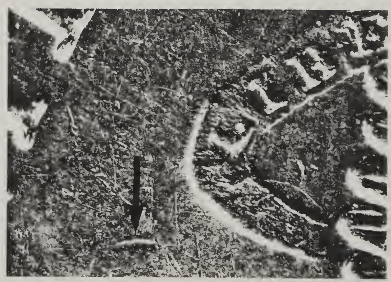
The counterfeit version of the 1852 ten-dollar Assay piece is likewise prooflike, and exhibits repeating depressions. The most prominent is a circular depression between the N and I of CALIFORNIA on the reverse.



Counterfeit 1853 United States Assay Office twenty-dollar gold obverse and reverse.



Close-up of counterfeit 1853 United States Assay Office twenty-dollar gold obverse. The arrow points to the depression near the end of the branch.



Close-up of counterfeit 1853 United States Assay Office twenty-dollar gold obverse. The arrow points to the depression in the field between the legend and banner.

Genuine pieces do not possess the prooflike appearance of the counterfeit. Rather, their fields are rough and textured, with considerable die flow. The devices, letters, and digits on the genuine pieces are sharp and well-defined, erupting from the fields and having sharp, angular features.

Other than these two deliberate counterfeits, the rest of the territorial coins found in fake form are common, cheap replicas. These are made of base metal and are detected easily by the presence of a seam along the edge. Also, the weights of these replicas are considerably lower than what they should be.

Official Guide to Coin Grading and Counterfeit Detection
edited by Scott Travers.
written by John Dannreuther

Stacks 12/4/97

U. S. TERRITORIAL GOLD

Lot No. 2566

2566 **$1.00 A. Bechtler** 27G. 21C. **Brilliant Uncirculated.** Rich coppery-orange toning on either side with hints of reflectivity evident in the protected areas of the design. It is unusual to encounter coins of this issue in this state of preservation.

A PLEASING 1851 AUGUSTUS HUMBERT $50.00 GOLD

Lot No. 2567

2567 **1851 United States Assay Office of Gold. $50.00. Augustus Humbert, Assayer. Reeded Edge. 880 THOUS. Target Reverse.** K.5. Extremely Fine. A greenish-yellow gold specimen with coppery devices. Well struck with a bold date and strong peripheral detail. There is a single reverse corner bump, otherwise the surfaces are unusually smooth and defect free for a coin of this issue. This piece makes a very nice presentation and will certainly enhance the collection of its new owner. ***(SEE COLOR PLATE)***

Lot No. 2568

2568 **1853 United States Assay Office of Gold. $20.00. 900 THOUS.** K.18. Extremely Fine. Coppery toning in the devices with some underlying mint frost still evident. A totally "honest" example of this scarcity and certainly worthy of consideration by the specialist.

U. S. TERRITORIAL PATTERN COINS

PATTERN 1849 CINCINNATI MINING & TRADING $5

Lot No. 2569
(Enlarged)

2569 **1849 Cincinnati Mining & Trading Company Pattern $5 Half Eagle.** Copper. Kagin 1 (Section B, Patterns), Alexander P.67. Very Fine. Reeded edge. Soft around the reverse legend. **Extremely rare:** rated R-8 by Kagin, one of just a tiny number known. The obverse shows an Indian of distinctly Massachusetts style; while the reverse bears a defiant eagle and shield. ***(SEE COLOR PLATE)***

PATTERN 1849 MASSACHUSETTS & CALIFORNIA $5

Lot No. 2570

2570 **1849 Massachusetts & California Company Pattern $5 Half Eagle.** Copper. Kagin 2B (Section B, Patterns), Alexander P.72. Very Fine. Reeded edge. **Extremely rare:** rated R-7 by Kagin, the Garrett specimen sold for $4,000.

EXTREMELY RARE MORAN & CLARK PATTERN $10

Lot No. 2571

2571 **1849 Moran & Clark Pattern $10 Eagle.** Copper. Kagin 1 (Section B, Patterns), Alexander P.88. Very Fine. Reeded edge. Some superficial scratches. **Extremely rare:** rated High R-7 by Kagin. Although Daniel Moran and John Clark hoped to make gold $10 coins and had dies cut for that purpose in 1849, no gold coins were ever struck. Only a handful of copper Moran & Clark $10 coins are known today.

Someone might lose his job over this admission

American Numismatic Association Certification Service
818 North Cascade · Colorado Springs · Colorado 80903
(303) 632-2646

KENNETH E. BRESSETT
Director

August 21, 1984

Mr. Eric P. Newman
6450 Cecil Avenue
St. Louis, MO 63105

Dear Eric:

Thanks so much for sending your very detailed report on the Humbert gold ingot, #E-5752-E.

We seem to agree on all of the points covered in your analysis. I am asking each of the ANACS authenticators to study everything we have on the piece before reaching a decision on what will be done with it.

I also want to send a copy of your report to Tom DeLorey who was involved with the piece both this time and when it came in for service around 1981.

The bar (but not your report) is being sent to Don Kagin for his comments. I will be sure to let you know his opinion.

Sincerely,

Kenneth E. Bressett

KEB/sbl

PROFESSIONAL NUMISMATISTS GUILD, INC.

ARBITRATION PANEL

PANEL MEMBERS:

RONNIE CARR, Chairman
LESTER MERKIN
HERBERT BERGEN

ARBITRATION CONTROVERSY BETWEEN:
PAUL E. GARLAND and THOMAS RYAN
Relative
To The
U.S.A.O.G. 1853 Double Eagle

OPINION, ANALYSIS
AND EXHIBITS
of
JOHN J. FORD, JR.

Expert Witness
on behalf
of
Thomas Ryan
Sustaining Genuineness

INDEX

Composite Drawing - Obverse and Reverse - 1853 $20 United States Assay Office of Gold: 900 Thous.

Introduction and Background - The Franklin Hoard Discovery Pages 1 to 15

The USAOG Study Group - An Impartial Investigation Of Unanswered Questions Pages 15 to 29

The Newman Report - Substance and Peripheral Contentions Pages 29 to 51

The Newman Argument - How The Franklin Hoard Coins Were Made Pages 52 to 92

The Franklin Hoard Coins - Whys and Wherefores Pages 93 to 113

August 1967

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INTRODUCTION AND BACKGROUND - THE FRANKLIN HOARD DISCOVERY

About fifteen years ago, I commenced the serious study of Pioneer Gold coins and related items, favoring unpublished material, including patterns, essais, experimental and trial strikes, and assay ingots. My studies included the compilation of a card file, a card being made up for each item seen or handled, with photographs affixed and pertinent data entered. I also started to gather photographs of as many different examples of published Pioneer Gold coins as possible, and I made an effort to obtain inventory listings of the largest collections of such material. Since 1952, I have assembled a comprehensive file card listing containing both data and photographs pertaining to hundreds of unpublished pieces, and well over a thousand photos have been accumulated illustrating specimens of various regular or published Pioneer Gold coins and ingots. A reference library of non-numismatic literature pertaining to the western mining states has been put together, with considerable emphasis placed upon the acquisition of early business directories. Where specific books were not available for purchase, I examined them in libraries. For instance, I spent a week at the Huntington Library in San Marino, California, as early as 1958, taking notes from 1850-55 San Francisco newspapers and perusing rare directories. My files include the inventories of such large and famous Pioneer Gold collections as those of W. C. Newcomer, J. W. Garrett, F. C. C. Boyd, King Farouk, J. H. Murrell, Henry H. Clifford and Josiah K. Lilly. Information has also been gathered concerning other holdings, such as the Col. Green, Smith, Dupont, Williams and Painter collections. The contents of institutions have been examined and listings made. My regular numismatic library is probably as complete as any privately owned so far as the American field is concerned, and includes not only books, but notes, documents, correspondence and similar associated papers.

Shortly after I started the study of Pioneer Gold, I developed an interest in rare coin forgeries and counterfeits and began a parallel investigation into the intricacies of that fascinating field. Before long, I found myself with a large collection of photographs of fake coins and a file of information and data on numerous examples, mainly modern, of coins fabricated to deceive collectors. Material of this nature is invaluable to a professional coin dealer, and it is no coincidence that two former employees of the New Netherlands Coin Company, Walter H. Breen and Don Taxay, are avid students not only of false coins but of coin manufacturing techniques employed for making both genuine and counterfeit items. Breen is well known as an author of numerous numismatic articles and reference works and for his activities in the field of rare

U. S. coin authentication. In 1962 I collaborated with Don Taxay on the manuscript of his definitive work "Counterfeit, Mis-Struck, and Unofficial U. S. Coins," and wrote the Introduction for his book. Subsequently, Taxay and I co-authored a series entitled "Counterfeits of U. S. and other Coins Reported," which appeared in the first four 1964 issues of "The Numismatist," and which was later reprinted in "Coin World." Other articles of mine concerning copies and forgeries have appeared in various numismatic publications since 1950. One of them, "Counterfeit Small Size Gold Dollars," published in the March, 1960 issue of "The Numismatist," was partly instrumental in the apprehension, arrest and conviction of the first large size distributor of these European made cast copies in the United States. In March, 1965 I arranged a workshop on false coins in conjunction with the first convention of the Professional Numismatists Guild, and participated at length in the ensuing highly successful program. Upon numerous occasions I have spoken at numismatic conventions, club meetings and other gatherings, on the subject of counterfeits and forgeries. In fact, Virgil Hancock has requested I speak at the "counterfeit forum" to be held here in Miami, during the 76th annual convention of the American Numismatic Association. My name is no secret to the law enforcement officials in the New York area responsible for the prosecution of those who create or traffic in false numismatic material. The approach to the elimination of the cancer of counterfeiting cannot only be intellectual, it must also be pragmatic. At the present time I am assisting the U. S. Postal Authorities in the pursuit of a criminal indictment against a dealer in foreign coins who recently distributed cast copies of rare twentieth century Italian silver coins throughout the country. Unfortunately, most activities of this kind must be kept confidential because of their very nature, but suffice to say, I participate in every way that I can towards eliminating fake coins from the numismatic market, in educating dealers and collectors towards the detection of such material, and in nullifying the efforts of those who either create such items or profit by handling them.

At the present time, I am the Chairman of both the Authentication and Spurious Coins - Detrimental Practices committees of the Professional Numismatists Guild, Inc., the oldest and largest American rare coin dealer's association. In 1965, I attended the Paris meeting of the First International Congress for the Study Of and the Defense Against Coin Forgery. The Congress established a five man Permanent Commission to implement its resolutions and to carry out its aims. I was offered a seat in that body, as the United States representative, but declined, and accepted instead the position of co-chairman of the Committee on Forgeries of the International

Association of Professional Numismatists. It was, and is, my feeling that I could accomplish much more in the latter capacity.

As a well known professional numismatist long dedicated to the war against fakes and fakers, it somehow seems ironic to me that I should, as a witness, be explaining as an expert coins I and others have sold. On the other hand, it also seems altogether fitting that I can be privileged to speak for that responsible element among rare coin dealers who provide expert authentication of what they sell, but also who know such merchandise.

No single event triggered my exploration of the unknown areas of the Pioneer Gold field more than did my meeting with Paul Franklin in the fall of 1952. Franklin at that time was a resident of New York City but was keenly interested in the American West. For several years prior to our knowing each other he had taken his family on two and three week vacations to Colorado, New Mexico, Arizona, Utah, Nevada and California. A specialist in odd and unusual numismatic items, Franklin had picked up two Mixed Metal assay ingots on his trips. I had catalogued two similar items for Wayte Raymond for inclusion in the 1952 A.N.A. Convention sale catalogue, and had procured another from him. Being interested in the pieces that Franklin had, I purchased both of them. Studying those, and becoming more and more interested, I asked him if he could obtain others. Once he knew I was serious, he went to work. Paul Franklin had many friends from his Army days in the Southwest, and he also displayed a great knack for making acquaintances and gaining new friends. Soon he had a network of people, including the field employees of a local telephone company, looking for privately made gold coins and assay bars of gold or silver or the mixed metal combination of both. These people scoured Banks and Assay Offices, Jewelry Shops and Antique Stores, not only in Ghost Towns, but in cities the size of El Paso and Phoenix. Franklin joined the Arizona Small Mine Owners Association[1] and advertised in the various mining trade papers and journals.[2] In time I prepared an elaborate circular that explained what numismatic bars and ingots were and which illustrated Pioneer Gold coins, western paper currency, and assay bars. Thousands of these were printed bearing Paul Franklin's name and address and distributed by him throughout the western states.[3] People having items of possible importance were asked to tell Franklin what they had, or, preferably, to send him a pencil rubbing. If an item was of interest to me, I advised him what it was worth and he

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1. Letter, C.F. Willis, State Secretary of the A.S.M.O.A., to Paul Franklin, Oct. 23, 1953 (Appendix item No. 1).

2. A typical Paul Franklin advertisement, circa 1953, possibly in "Pay Dirt" (Appendix item No. 2).

3. The third and latest (1966) printing of the illustrated circular on numismatic bars and ingots used by Paul Franklin (Appendix item No. 3).

either sent the money to a friend or an agent so that the piece could be picked up, or else himself flew west on a week-end or over a holiday, and made the purchase directly. In retrospect, some of the early correspondence between westerners and Franklin, and even between Paul Franklin and myself, seems amusing.[4]

We had a good thing going. Franklin found the material and I researched and sold it. Occasionally, something was of particular personal interest and I kept it. Franklin also retained a few pieces, being interested in the relatively inexpensive silver and mixed metal assay bars. Our working arrangement was simple. Our arrangements were made early during our joint operations and under it Franklin was not to tell me where he obtained his material although he was to give me original source names wherever possible for my records. On the other hand, I was not to reveal to him the names of my customers with whom I was dealing. My confidence in Paul Franklin was well founded as, for example, in 1956 he located an unpublished ingot of F. D. Kohler, issued at the State Assay Office in Sacramento and because he paid a nominal price for the piece he gave it to me at his cost plus expenses, since he questioned its authenticity. It was only after the late F. C. C. Boyd insisted that it was genuine, that he would accept from me a generous profit for finding the ingot which I voluntarily offered him. Since a great many of the items he unearthed were unknown and not previously published, it was my responsibility to find out exactly what they were, why and when they were made. In instance after instance, Franklin argued with me, always taking the conservative position. I learned to admire and respect Paul Franklin, and our families became close and good friends. My wife and I are the godparents of one of his children, and the two of us have spent half-a-dozen vacations together with the Franklins.

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[4] Letters (4): F. Korff, Mesa, Arizona, to Paul Franklin, regarding Blake & Agnell and Blake & Co. items, September, Oct. 18, 1953; S. Skaar, Nevada City, California, to Paul Franklin, regarding J. J. Ott assay bars, n.d., circa 1954-55; Paul Franklin to John J. Ford, Jr., regarding B. Baxter & Co. gold assay bars, November 9, 1952 (Appendix Items, Nos. 4-7).

Early in 1957 Paul Franklin stumbled upon what turned out to be his greatest and most prolific find. This consisted of a hoard of coins and related pieces from the United States Assay Office of Gold, situated in San Francisco, and operative in 1852-53. His initial contact was a teller in a Phoenix Arizona area bank, but eventually he did business with the bank president. In time, he met the owner and source of these USAOG items, an elderly gentleman named ,[5] who ten years ago resided on a ranch located between ,[6] and ,[7] Arizona. The coin presently owned by Paul Garland was one seven perfect prooflike twenty dollar pieces, of conventional design, that Paul Franklin obtained directly from the owner on a trip to Phoenix, February 19-23, 1958. These coins, together with three other impaired impressions, were wrapped in three or four old, yellowed linen handkerchiefs. Eight of the pieces had the weight marked in grains on the handkerchiefs in lead pencil; one or more of the coins also had the alloy inscribed in similar fashion on at least one handkerchief. Franklin could not obtain the handkerchiefs, nor could he copy the information marked on them, since the owner was afraid that his family would somehow find out that he was selling coins and realizing funds obtained from them. In spite of the old man's fears and general reluctance to give out information, Franklin managed to make a note that one of the seven perfect prooflike pieces contained .020 Thous. copper, a fact he conveyed to me when he delivered the lot, together with the information that he was convinced that most or all of the seven perfect specimens and probably some of the impaired ones represented experimental alloy strikings.

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[5] The name of the owner and source of the USAOG material is give only on the copies of this report prepared for the members of the Arbitration Panel.

[6, 7] The last known resident address of the owner and source of th USAOG material is likewise given only on the copies of this re prepared for the members of the Arbitration Panel. An effort been made to ascertain the present whereabouts of the owner ar source of the USAOG Hoard items. Evidence of this search is c firmed by a letter to John J. Ford, Jr. from attorney Laurenc Rosenthal of Strasser, Spiegelberg, Fried & Frank, regarding from attorney George P. Vlassis of Brown, Vlassis & Bain, of Phoenix, Arizona, dated June 26, 1967, and by a letter to Mr. Rosenthal from Mr. Vlassis, dated July 25, 1967 (Appendix ite Nos. 8-9).

Franklin had obtained a few USAOG items prior to his first 1958 trip, and on subsequent visits to the Phoenix area picked up others. On a trip west by car during the summer of 1958 he purchased the only steel die in the Hoard, paying the bank president $50. on August 14, 1958, on behalf of the owner. This die was obtained only upon my strong insistence, as were some of the lead trials, because of their great historical value.

It was delivered to me by Franklin at the A.N.A. Convention held in the then Los Angeles Statler Hotel, August 13-16, 1958. I only paid him his purchase price for it, because (1) he had picked it up for me as a personal favor and (2) the die was very badly rusted and corroded, being hardly identifiable. (See D-105, Physical exhibit A-1) All the USAOG items obtained from time to time, and classified as Essai Coin Ingots, Experimental pieces, Trial pieces, Assay bars, Proofing pieces, and such, were purchased for my benefit. This material continued to be available, on a rapidly diminishing basis, for several years after 1958. I obtained at least one Proofing piece as late as 1962, and I know that Franklin sold another that he had just obtained to Leo Young in September, 1965. Franklin was given the information several times that nothing more was available but he was also told upon numerous occasions that many items had been distributed, over the years, to various members of the owner's family. Apparently, a casual effort was made, from time to time, to recover these as they could be found in order to sell them to us.

Nine years ago, I was told about three octagonal USAOG fifty dollar gold pieces with reeded edges, one of which was stamped with large numeral punches. From the descriptions given to me, I concluded that at least two of these coins were of the conventional 1852 design, and that they (like the seven USAOG twenty dollar coins under discussion) were perfect prooflike specimens. If so, they would easily be the finest known examples of either the 887 or 900 Thous. varieties. Some time later, a very high denomination ingot having the fifty dollar eagle design was also described to me, the information relayed to me by Paul Franklin from his bank president contact. I of course expressed interest in all four items, but was told that they were not (at that time) available. The three fifty dollar slugs were said to have been given to a son of the owner, who did not wish to dispose of them. The high denomination piece was apparently the cause of some kind of a family dispute over a gift or an inheritance... it even being intimated that some kind of litigation was involved. I long pressed Franklin to try and obtain the large ingot with the coin design, and he repeatedly told me that his banker friend told him that it was not available, but that when it was, that he (Franklin) would be contacted. In spite of the material that still might be available from this USAOG Hoard source, I tried to get Franklin to obtain a statement from the bank executi concerning the name of the owner, thus explaining the source of the various items that had already appeared. Franklin attempted to do so, even to the extent of taking a draft of a letter I had prepared to him, but the banker told Franklin he did not want to get mixed-up with any kind of trouble over the coins and similar material, since it could only compromise his position with the bank. During the long course of the various USAOG transactions, it seems that the bank with whom Franklin's contact was connected merged into a larger bank, becoming a member of that organization's chain, and that instead of being a president of a small institution, the man was now a branch manager of a local office of the larger bank. It is understandable, how a banker would not want to become implicated with an investigation concerning numismatic items that he had been led to understand were of limited value, particularly since he stressed to Franklin that his present position prohibited any "extracurricular" or unofficial business activities. This attitude, plus my original arrangement with Franklin, combined with his strong reluctance to take any stock in the allegations concerning the authenticity of some of the USAOG material, inhibited Franklin from revealing to me the name of his banker friend and seemingly prevented him from taking me to that gentleman. Of course, it should also be made clear that Franklin has had some personal marital problems during the past two years, and that all things being equal, he has a strong aversion to arguments or controversy of any kind.

In spite of my attempts to learn the name of the agent or middleman in these USAOG transactions, or even to ascertain the present whereabouts of the owner from whom many of them were directly obtained, I must confess a certain lack of enthusiasm in attaching a high degree of importance to pedigree, especially when a question of genuineness is raised. A pedigree, alleged or otherwise, does not constitute decisive evidence about when or how a coin has been made. Only technical evidence predicated solely upon the fabric and die work of the coins themselves can be conclusive. I have long authenticated coins and conducted business on this basis, precisely because the best history of ownership in the world cannot make, in my opinion, what I otherwise consider a "bad" coin, a good one! Conversely, the lack of a pedigree cannot impair or even challenge the authenticity of a coin, particularly when a long and conscientious effort has been made to examine and test that coin on strict scientific grounds of physical composition, weight, hub and die characteristics, hub and die progression, planchet manufacture and/or preparation, strike or surface. This is even more true when the relationship of such a coin to the components of its manufacture has been favorably researched, and when a solid historical basis for the very existance of such a piece can be readily established.

Not all of the USAOG coins that Paul Franklin obtained in Arizona found their way into my hands or were handled by the New Netherlands Coin Co. He often enjoyed selling or trading lower priced coins on his own, and I mistakenly did not attach any importance to the somewhat damaged or mishandled 1853 900 Thous. USAOG twenty dollar gold pieces, of conventional design, that Franklin sometimes had for sale. These all came from the Hoard source, directly or indirectly, usually at a cost of $100. each. He sold many of them at prices ranging from $150. to $250. but sometimes obtained higher prices. Occasionally, when he obtained an example that was prooflike and almost perfect, he retained it for his own collection of Pioneer Gold twenty dollar type coins. If something more appealing came along, or if he felt short of funds, he would dispose of the piece in his collection, no doubt on the assumption that he could always pick up another one. Often, when wanting to sell these exceptional specimens he would involve me in the transaction, and the result would be a sale at a relatively high figure. Unhappily, I did not keep any records concerning the regular USAOG twenty dollar coins that Franklin handled from his Arizona find, but I venture an educated guess that the total number did not exceed twenty pieces. Of this number probably no more than half-a-dozen realized in excess of $750., with Harry J. Forman, of Philadelphia, obtaining perhaps the best of the "impaired" prooflike strikes at about $1,800. in April, 1963. This Forman specimen (USAOG-111) was of particularly high quality, and was one of the last Hoard coins that Franklin personally retained and sold. Ironically, to the best of my knowledge and belief, Paul Franklin's own collection does not presently contain a twenty dollar gold piece from his Arizona

USAOG discovery.

I am sorry to say I did not realize until very recently that several of the regular type USAOG twenty dollar gold coins from the Franklin Hoard could also be experimental strikings in various alloy combinations of gold, silver and copper, and thus of far greater value than any of the regular production pieces, of which over two-and-a-half million were struck for circulation.

THE USAOG STUDY GROUP - AN IMPARTIAL INVESTIGATION OF UNANSWERED QUESTIONS

At the 1964 A.N.A. Convention I was questioned by Dr. James O. Sloss concerning a perfect prooflike 1853 USAOG twenty dollars of the 900 Thous. variety he had purchased in February, 1959 from the New Netherlands Coin Co. His coin was one of the seven obtained by Paul Franklin while on a trip to Arizona a year earlier. Sloss was very much concerned about the original origin of his piece, and was quite distressed when I could not answer some of his queries. Dissatisfied with my response, Sloss apparently became suspicious of his coin, and decided to investigate its authenticity. To this end, and to examine similar specimens, he enlisted the help of George J. Fuld, Abe Kosoff, Eric P. Newman, and John J. Pittman. These gentlemen have been referred to as the USAOG Study Group. Shortly after the formation of this group, the investigators brought in two additional Franklin Hoard coins. One of these was similar to the Sloss example, and like it was one of the seven brought back by Franklin from his trip of Feb. 19-23, 1958. It was owned by Paul Garland, then a resident of Melvindale, Michigan. The other, a coin of lesser quality, was one of the handled or slightly impaired pieces lacking full proof brilliance of the sort that Franklin generally sold himself. This piece was owned by Herbert Tobias of Brooklyn, New York. Soon after the inclusion of these additional pieces into the investigation, Fuld, at that time associated with the Research Division of the Goodyear Tire & Rubber Company in Akron, Ohio, decided to test all three coins at the Goodyear plant. Using three regular USAOG coins for control purposes (Newman Nos. 2, 3, 4), Fuld had tests performed on the three aforementioned Franklin Hoard pieces (Newman Nos. 5, 6, 7). The Fuld sponsored tests consisted of X-Ray diffraction photographs using back reflection techniques. The photographic prints from these tests were interpreted to show that the planchets for the control coins had been rolled and drawn, but that two of the Franklin Hoard coins were struck upon planchets that had been produced by casting, while the third was struck upon a machined planchet. George Fuld did not wait to have his tests substantiated. He did not bother to try and understand their significance, even if they had been verified. As far as he was concerned, the word "cast" was in the reports, and "cast" was a dirty word. Accordingly, he wrote a letter to Werner Amelingmeier, a customer of mine, and a friend of long standing. (At one time I had told Fuld that Amelingmeier knew Franklin, and that he had purchased some of the mishandled USAOG coins.) The Fuld letter to Amelingmeier, written on September 30, 1964, was a rash one.[1] I would like to quote parts of it: "A number of independent 'experts' are reexamining the so-called 'Proof' and first strike 1853 U. S. Assay Office 900 fine $20 pieces. These pieces, of which you owned several of (sic) in 1958 are 'counterfeits' - (I only can speak of the ones so far seen and examined!) - however the most horribly deceptive we have ever seen.... Please don't discuss this with John Ford, although he is aware of the investigation." Amelingmeier passed this letter on to me, and I in turn gave it to our attorneys. They in turn wrote to Fuld, suggesting he not write any additional letters in the same vein.

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[1] Letter, George J. Fuld to Werner Amelingmeier, September 30, 1964 (Appendix item No. 10).

Fuld, in the meantime, presumably advised Garland that his coin was struck upon a cast planchet. Garland was then writing a column for the "Blue Ridge Coin News," entitled "Numismatic Garlands." Using the formation of the Study Group and the latest intelligence from Fuld as a theme, Garland composed a rather vociferous article for the November, 1964 issue.[2] While most of what he had to say is of minor importance, some of that column should be reproduced here since it refers directly to the subject coin at hand. Garland started out with a question: "Have you ever purchased a coin that exceeded more than a thousand dollars in value?.... How would you feel if you made a purchase of this nature and later found the coin to be counterfeit?.... My thoughts tell me you would answer the foregoing question by saying, 'I would have the coin authenticated.' Now, I must ask you where would you have the authenticating done? More than apt (sic) your answer would be a major coin dealer. Let me tell you this. There are no coin dealers in this country capable of determining authenticity. They do not have the costly X-Ray equipment on hand to do the job. To anyone who has found himself in the above position, I have a few words of advice. If you purchased the coin and accepted a piece of paper attesting to the genuiness of the specie (sic), regardless of who issued the paper, I would have the coin X-Rayed. This is the only way to know for sure that your coin is genuine.... To those of you who doubt me, let me make it clear that there are counterfeit coins on the market today that no dealer can detect without the aid of special equipment. This equipment costs far beyond the means of the largest dealer in America.... I have seen false coins from the foremost validators known. In fact, I am the not too proud possessor of a false coin that I paid three thousand, three hundred dollars for. It is as false as Hensteeth. This coin has a pedigree all the way back to the press. It was declared genuine by the best known house of authentication in our country. In fact, it was declared a proof. It has passed through the hands of several of the best known and trusted dealers in our country. Other pieces are now resting in the collections of some of America's best collections (sic), with the owners totalling (sic) unaware that the pieces are counterfeit.... Together with John Pittman, Dr. George Field (sic), Eric Newman, and several other of the best known Numismatists in the country, we have been able to prove that the coin is false. Several letters have exchanged hands, threatening law suits and other attempts to silence us; but the public will know the facts." Garland went on in his tirade to reveal that Fuld was planning to speak about his coin at the Educational Forum of the New York Convention of G.E.N.A., the first week-end in December. He also went on to say that "it would be possible to reveal the entire story now, but as yet we do not know definitely who made them."

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[2] Newspaper clipping, "Numismatic Garlands" by Paul E. Garland, pg. 2, "Blue Ridge Coin News," November, 1964 (Appendix item No. 11).

Garland also stated that two additional pieces were to be examined, and if the owners did not voluntarily cooperate, "they will be requested to do so by government agents." Fuld never did make his speech of revelation at the Educational Forum of the Great Eastern Numismatic Association's Convention, but he did try to bring government officials into the controversy, possibly in an attempt to lend credence to some small portion of the Garland article. On November 17, 1964 Fuld turned over several USAOG coins he had in his possession to the Cleveland, Ohio office of the Secret Service, much to the distress, if not the anguish, of his fellow investigators. Fuld, in turning the coins in, claimed that they were counterfeit, or at least that some of them were. Subsequently, the Secret Service returned the coins, having received a ruling from the General Counsel of the Treasury Department that the coins were not obligations of the United States government,[3] and that they therefore had no jurisdiction in the matter.

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[3] Despite the ruling of the General Counsel of the Treasury Department it is a well known fact that the United States Assay Office of Gold operated under the provisions of a bill passed by the 31st Congress, September 30, 1850, its function being that of a provisional (and irregular) U. S. branch mint. It is of the highest significance that the coins issued by Augustus Humbert (as United States Assayer) in 1852-53 bore the legend UNITED STATES OF AMERICA. That was legally interpreted, then as now, to mean that the United States government stood behind these coins as issuing authority. It has been long established that the USAOG equipment was taken over in October, 1853 for official branch mint usage, and that on the whole this equipment had been furnished originally by the Philadelphia (parent) Mint. In the National Archives can be found regular monthly reports of the USAOG, signed by Humbert as U. S. Assayer, which are of the same kind as those furnished by superintendents of the other U. S. branch mints then in operation in New Orleans, Charlotte, North Carolina, and Dahlonega, Georgia. (See National Archives: Records of the Bureau of the Mint, Record Group 104, Treasury Section.)

While Garland and Fuld were preoccupied with the possibilities of official intervention into the USAOG situation, the founder of the Study Group was also busy. One evening, Sloss called Charles Wormser at his home, and in a lengthy conversation told him that his business associate of almost fourteen years standing had involved New Netherlands Coin Co. in the sale of false coins. Needless to say, Wormser was quite upset by this conversation, as Sloss had long been a client of ours, and the both of us thought him a friend. A day or two later I telephoned Sloss, and in the course of our discussion offered to take back his perfect prooflike USAOG twenty dollar coin, refunding to him the $1,200. he had paid for it under the New Netherlands policy of Unconditional Guarantee. My offer was qualified only to the extent we would accept the piece back if it were agreed in writing we did so without prejudice to the coin. In other words, we agreed to take back the coin and refund the purchase price on the premise that Sloss was dissatisfied, but under no circumstances were we prepared to do so if the claim was predicated upon the contention the piece was fraudulent. Sloss balked at my suggestion, and when I asked him why he did not accept it, the candid reply was "What if the coin turns out to be good?"

Shortly after the Study Group was formed I was contacted by Eric P. Newman who asked if I would cooperate with the group's investigation. Being assured that the inquiry would be professional and be conducted fairly and impartially I agreed to help to any reasonable extent. In this connection, I sent Newman specific information relative to the discovery of the seven perfect prooflike USAOG twenty dollar pieces by Franklin. My letter was quite explicit and included some data I had previously kept confidential.[4] At about the same time, I also sent Newman six lead trial pieces of the USAOG from the Franklin Hoard (Newman Nos. 20-25) for his examination and so he could photograph them. Newman and I exchanged several phone calls and letters during the fall and winter of 1964-65. It was my hope we could continue the exchange of information and perhaps reach a similar decision. However, Newman seemed enigmatic. He said he could not tell me what the other group members were doing. He told me he could not disclose any of his own theories or interim conclusions. I proposed we get together at my home where I had considerable information not otherwise available to him but he reacted disinterested. He visited New York City but made no serious attempt to see me. His actions were a mystery to me, until I reflected upon the activities of his compatriots and those of Garland, and slowly was forced to conclude I had no hope of participating with him in any fair or unbiased professional inquiry.

Fuld and Sloss had quickly shown their colors, and now Newman was subtly disclosing his. The coins were prejudged bad from the start, and the "investigation" in reality consisted of searching out (or fabricating) evidence needed to corroborate such conclusion. Upon realization I was confronted with a mock scientific inquiry, I was forced to revise my plan of full cooperation and thereafter not furnish additional information or coins from which unilateral conclusions would be privately reached only to be used against me.

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[4] Letter, John J. Ford, Jr. to Eric P. Newman, October 11, 1964 (Appendix item No. 12).

It was suggested Franklin was the culprit and I a fellow criminal or at best a dupe. Franklin resented the veiled and unveiled charges and innuendos directed against him and wrote a letter to me deploring what was going on.[5] I even promptly sent a copy of the pertinent part of this letter to Newman,[6] who did not know Franklin at all and who had relied upon rumor and hearsay. It had been my hope, now proven vain, that Newman would sense Franklin's sincerity, and possibly attempt to better understand him if not to communicate with him. Newman was not moved. He had already made up his mind and he wanted not to heed any unsettling factors.

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[5] Letter, Paul Franklin to John J. Ford, Jr. (first two pages), November 23, 1964 (Appendix item No. 13).

[6] Letter, John J. Ford, Jr. to Eric P. Newman, December 3, 1964 (Appendix item No. 14).

While it was obvious to me some of the Study Group members sought instant publicity by a quick and easy path it was equally easy for me to understand what might have prompted sincere action by some of the group participants. Both the perfect and the so-so prooflike Franklin Hoard USAOG twenty dollar coins did not resemble any other gold United States proofs known to them. Specifically, these coins appeared peculiar in comparison with the only other 1853 USAOG twenty dollar Proof extant, the piece purchased by Abe Rosoff at the 1954 sale of the Farouk collection.

The Kosoff Proof, listed by Newman as his No. 12 (my USAOG-123) has long interested me, probably because of its peculiar characteristics. Careful examination of the obverse reveals that it emanated from the very late or final state of the much used obverse matrix, that having a wide 900 over 880 (used for hub Groups IV through X). LIBERTY on the ribbon is thin and distorted; there are obvious signs of lapping at 900 THO; the A's have imperfect crossbars; there is considerable over-all evidence of corrective hub and die work (grinding and/or lapping, recutting). Last but not least, there are suggestions of the use of a graver on the die on the I of UNITED, and, as I mentioned later, it is obvious an attempt was made to efface the diagonal die scratch just right of the second A in AMERICA on the hub. Like the obverse, the reverse of this piece was struck from a die that originated with a matrix that had seen better days. This workhorse was probably responsible for every working hub sent from Philadelphia to San Francisco, the chip under the right arm of the T of UNITED being its hallmark for at least four (and possibly five) of the working hubs used by Humbert in the USAOG. The tablet frame line dent below the F of CALIFORNIA can also be made out, although an obviously crude attempt was made to flatten it out, rather than to reduce it with a graver on the die. (As I later state, this frame line dent originated either on an original hub or even on an original tablet puncheon which would be raised or positive.) The field area about the periphery of this reverse shows serious tiny chips or rust pits not found on any other example of an 1853 USAOG twenty dollar coin examined. The tablet with its four lines of inscription has been extensively ground down and lapped. The right stroke of the Y in ASSAY, the base of the C and the left part of the triangle of A in CALIFORNIA, are all missing. There are heavy extra outlines around numerous letters and at 53, suggesting considerable work not only on the die used to strike this coin, but on the hub used to produce the die. A comparison with the outline to the left of the 5 in the date with the original matrix impression in copper in my collection (USAOG-125) discloses a remarkable similarity. All signs of what I will call the "circumferential" break at right together with any other break evidence or defects inherent to the matrix were removed from the hub but the chip under the T was not, presumably because it was as deep as any letter, and its removal would have resulted in severe damage to the adjacent letters (similar to the obvious damage done to the Y, C and A, already mentioned). It is not surprising to me this coin does not look like the Franklin Hoard prooflike coins... indeed, why should it? This "genuine Proof" (as one of the Study Group members called it) was made in Philadelphia, probably circa 1858-59 when restriking and similar operations were the order of the day. The truth of the matter is, I doubt if this restrike ever saw California until Abe Kosoff owned it.

Edgar H. Adams, writing in the April, 1909 issue of "The Numismatist," also thought the Kosoff Proof was made at the Philadelphia Mint but he came to his conclusion for different reasons than I did. Many wild and unverified stories have been heard concerning this coin, so many in fact that I long thought more than one specimen existed. However, my research to date suggests all of the tales are concerned with just one piece, proving that this unique item has a long and interesting history. It first appeared as lot 397 in the collection of George F. Seavey, of Cambridgeport, Mass., and was sold by Bangs, Merwin & Co. at their sale of June 21-22, 1864. Thirty-eight years later it was offered as lot 532 at the Lyman H. Low auction of the Herr Georg F. Ulex collection from Hamburg, Germany. This sale took place on July 8, 1902, and cataloguer Low, in hurriedly looking at the coin and noting the peculiarities about the 3 of the date, wondered if it might be "1853 (over 52?)." It was "rediscovered" early in 1909 by New York dealer David Proskey who soon after sold it to the biggest "live buyer" of the period, Waldo C. Newcomer of Baltimore, for $100. This splendid example of Adams 23[7] was number 2734 in the Newcomer inventory. After Newcomer's unfortunate death, B. Max Mehl handled the gold portion of his collection including the Pioneer Gold coins. Mehl priced the Kosoff Proof at $350., reduced it to $250., and finally sold it at the "special price" of $100. to Wayte Raymond, December 14, 1933. Raymond promptly sold it to his prime customer, Col. E. H. R. Green. Green died in 1936, and the coin found its way into the hands of Jake Bell of Chicago, possibly through the offices of St. Louis dealer B. G. Johnson. It was lot 1043 in the Stack auction held of the J. F. Bell collection, December 7-9, 1944. Morton Stack, in preparing the catalogue for that sale, also believed the piece to be an overdate. From the Bell offering at $825., it went to King Farouk of Egypt, reappearing as lot 349 in the Palace Collections of Egypt, sold by Sotheby & Co. thirteen years ago.

As earlier shown, the activities of the Study Group convinced Garland his coin was false. Accordingly, he made a determined effort to return the piece and to have his purchase price refunded. Garland had purchased the coin from Tommy Ryan of Chicago. Ryan did not consider the piece to be spurious, and refused to refund Garland the money paid for it. This particular specimen was the fourth one sold (of the five that were disposed of) from the group of seven perfect prooflike examples Paul Franklin obtained in 1958. It was initially sold by us to Mike Kolman at the A.N.A. Convention in Los Angeles, August 15, 1958, for $1,200.

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[7] pg. 56, "The Moffat & Co. Issues, San Francisco, 1849-1853," Part II of "Private Gold Coinage of California," Edgar H. Adams, Brooklyn, N.Y., 1913.

Not being able to obtain a refund from Tommy Ryan, Garland took his problem to the Professional Numismatists Guild, of which Ryan is a member. The P.N.G. went to considerable lengths to resolve the situation to the satisfaction of both parties but was unable to do so. Accordingly, an Arbitration Panel was formed, under P.N.G. auspices, to decide the dispute between Garland and Ryan. The three members of this Panel are Herbert M. Bergen, Second Vice President of the A.N.A., Ronnie Carr, like Bergen a Californian and interested in Pioneer Gold coins, and Lester Merkin, the well known New York dealer.

At a hearing of this Arbitration Panel at the A.N.A. Convention in Chicago, August 19, 1966, Eric P. Newman, allegedly as an expert and purportedly representing the Eric P. Newman Education Society (which incidentally has no position in this controversy or in anything else as an expert) and proposing to speak for the USAOG Study Group members present, read a report entitled "An Inquiry into the Authentication of a Hoard of $20 United States Assay Office Gold Pieces." Let us examine that so called and self styled report.

THE NEWMAN REPORT - SUBSTANCE AND PERIPHERAL CONTENTIONS

Newman's report on the Garland owned 1853 USAOG twenty dollars from the Franklin Hoard and five similar pieces is seemingly a study of disorganization and confusion. Much appears to have been intentional for the purpose of making analysis and reply unnecessarily difficult. On page 2 of his Inquiry Newman said he was "avoiding the use of names of individuals to the extent that a full disclosure of facts will not be adversely affected." In my opinion, the names of individuals were left out of the Newman report so that it would be next to impossible to identify the owners of the coins that the Newman conclusions were based upon.

One of the most ludicrous non-technical statements in the Inquiry can be found on page 3. There he says "Any opinion expressed must be based upon certainty, and for that reason facts relating to inconclusive findings or speculation as to facts will be omitted...." All logic is contrary to this remark. Opinion evidence is, and is always by its very nature, not based on certainty but on opinion. Facts, all facts, should be sought and their significance sifted and weighed in formulating the final act which is the opinion.

Further along on page 3 Newman refers to an ad in the July, 1963 issue of "The Numismatist," and to a letter which appeared in the August, 1963 issue of the same magazine. The advertisement referred to bore the name of Louis S. Werner, the New York dealer, and the letter mentioned was mine written in reply to Werner. For reasons of his own, Werner wanted to "buy" an USAOG twenty dollar coin in "Gem Proof Mirror Surface Condition." My letter was an effort to set the record straight should there have been any confusion engendered by the Werner ad. While my letter contained much that I still believe to be factual and correct, I mention it here only because it might suggest I thought at that time that all 1853 USAOG 900 THOUS. twenty dollar coins were from the same pair of working dies. If this was indeed an early failure to distinguish between two wholly hubbed working dies (like two large cent reverses of 1851), or evidence of the inability to recognize a Philadelphia Mint restrike, I trust the contents of these pages will rectify such error.

Newman, on page 4 of his Inquiry, makes much of various USAOG twenty dollar coins having been described or advertised as "proofs." Whatever the origin of these pieces, how they were described or advertised is not relevant to their genuineness. Reliance on advertising descriptions by sundry dealers is tantamount to ascribing to them a degree of specialist knowledge not necessarily possessed or available to them.

On page 5 of his Inquiry Newman observes that the listing of the 1853 USAOG 900 THOUS. twenty dollars on page #225 of the 19th edition (1966) of the Whitman "Guide Book of United States Coins," was accompanied by the comment, "Beware of spurious specimens in 'Proof' condition." He goes on to say that "This statement was inserted in the 1966 Red Book on the recommendation of a panel of 13 named advisors (p. 213) on U. S. Territorial Gold, all of whom were informed of the proposed statement before its insertion and no objection to it was then raised. The statement, however, was removed from the 1967 edition of the Red Book." Here we have a real comedy of Newman errors. It is true the quoted statement appeared in the initial printing of the 19th edition of the "Guide Book," but as soon as I saw it there I telephoned Dick Yeoman and insisted upon its removal. My name is on page 213 of the 1966 "Guide Book" as one of the panel members, and Newman well knows I would have only the most violent objections to such a statement. He is also aware, I am sure, that the majority of the panel members named would have voiced similar objections had they been informed of the exact nature of the proposed statement at their meeting, which took place at the Statler Hilton Hotel in Los Angeles in February, 1965. The Kagin brothers had just purchased one of the seven perfect prooflike pieces from the Franklin Hoard, the three members of the firm of Stack's had handled others. Leo A. Young could not have shared the sentiments expressed, as he purchased a Proofing piece from Paul Franklin three months after the 19th edition of the "Guide Book" appeared. I doubt if Walter Breen would have swallowed the implications of such a statement at that time without requiring substantiation. I doubt very much if Newman polled any of the other panel members as to the nature of their sentiments. If he did question any of them, he could never have made the presumptious observation found on his page 5.

Even if it were correct, the Newman reference to the unfortunate insertion in the 1966 "Guide Book" is totally irrelevant, since it calls for conclusions of purported fact reached on the basis only of an expression of apprehension, or the calling for conclusions of falsity of a coin on the basis of someone's anxiety about possible existence of counterfeits (none of which have ever been responsibly identified). How Newman hoped to influence or prejudice anyone by this immaterial distortion is beyond my comprehension.

A minor Newman misstatement is found on pages 5 and 6 of his report. He is in error saying "In making the dies for 900 fine pieces the 900 was punched over the 884 in the die and evidence of such overpunching is readily noticed on every 900 fine gold coin." Only three obverse hubs can be identified for the 1853 USAOG twenty dollar regular issue gold coins, and they are: (I) 884 over 880 THOUS.; (II) Narrow 900 (THOUS.), these numeral punches as on the ten dollars; (III) Wide 900 over 880 THOUS. These belong, respectively, to hub Groups II, III, and IV through X. Clearly, any original obverse matrix prepared bore the 880 THOUS. inscription.

On page 6 of the Inquiry Newman concerns himself with the appearance of four of the six Franklin Hoard gold coins he examined: "Coins #5, 7, 14 and 16 are glittering pieces, far shinier than normal proofs of the period and not as mirror-like. Coins which have been cleaned or polished subsequent to striking are sometimes found with similar patina but original strikings of United States coins are not. This makes it appear that an attempt has been made to produce an artificial proof surface rather than that the coins are normal proofs."

The seven perfect prooflike USAOG coins that Franklin delivered to me nine-and-a-half years ago were all washed in warm soapy water, rinsed in cold water, and then air dried. I performed this operation myself a few days after the coins were brought to my home because they were dullish in appearance and extensively fingermarked. They received no other cleaning, chemical or otherwise, nor were they involved in any kind of processing treatment while in my hands.

According to Newman, three of these same coins, the Garland, Sloss, and Kagin specimens, plus the exceptional Franklin Collection example now owned by Forman, all have artificially produced proof surfaces made after striking. Examination of the two perfect prooflike pieces retained for my personal collection with my Bausch & Lomb Stereo-Zoom binocular microscope fails to bear this out. I found no signs of buffing on the high relief details, nor did I see any of the signs of surface polishing that I learned to recognize several years ago when dealing with "home-made" 1936 and 1937 U. S. proof sets. In fact, the appearance of my two coins was that of impressions upon highly burnished planchets from partially lapped dies. Burnished planchets and lapped dies are, of course, pre-striking procedures.

In his statement on these so-called "glittering" pieces, Newman uses the term "normal proofs" rather freely without any explanation of its meaning, implied or otherwise. He also mentions "original strikings of United States coins," saying, in effect, that such strikings do not look like the Franklin Hoard prooflike examples. Let us see if Newman actually knows what he is talking about.

A basic or simple numismatic definition of the term (brilliant) "proof" is not difficult to conceive. Let us say a proof, generally, is a coin struck upon a polished planchet from polished dies, the result presumably representing the finest impression possible from those dies under the circumstances. In other words, a proof coin is basically the end result of a special coin manufacturing technique. It is not a state of preservation, or a degree of condition. When most American collectors hear the term "proof," they tend to think of Philadelphia Mint made proof coins, since the parent mint is where U. S. proof coins have long been normally manufactured. In short, the general concept of a United States gold proof coin is that it should be identical in fabric and appearance to a Philadelphia Mint proof of standard 1858-1907 quality. In this important instance, this idea is erroneous, and Newman has trapped himself by his lack of experience in the Pioneer Gold field.

Earlier, I said the United States Assay Office of Gold operated as a provisional (and irregular) U. S. branch mint. This being the case, why should their idea of specimen coins, struck under comparatively primitive conditions, resemble those of the Philadelphia Mint nearly three thousand miles away? The Franklin Hoard prooflike or specimen coins should not be compared to gold proof coins of the 1850-60 period struck in Philadelphia, but to other Humbert or Assay Office pieces which we believe represent the ultimate quality Humbert was capable of, or that he thought satisfactory of his purposes.

Sixty-six years ago, the Chapman brothers of Philadelphia were busy handling the numismatic portion of the Augustus Humbert estate. I have traced four different coins they disposed of privately, and found a fifth listed in the S. H. and H. Chapman auction catalogue of the William R. Weeks and Augustus Humbert collections, May 1-2, 1902, similar in appearance and quality. The five pieces are:

(1) 1852. Ten dollars. MOFFAT & CO. Liberty head. Rev. Eagle with shield holding ribbon, scroll above. This was lot 707 in the Weeks-Humbert sale, and was catalogued as a "Superb brilliant proof." It was purchased by Virgil Brand for $60., and upon his death passed into the hands of his brother, H. L. P. Brand. When Horace Brand died in 1962, this piece was

obtained by the late Robert Friedberg from his heirs, and subsequently consigned by the Capitol Coin Co. to the Schulman-Kreisberg auction sale of March 18-20, 1964. It was there listed as lot 2204, and was described as "A flawless gem prooflike specimen." I purchased the lot for $2,300.

(2) 1852/1. Twenty dollars. AUGUSTUS HUMBERT. / UNITED STATES ASSAYER/ OF GOLD. CALIFORNIA. Hub Group I. This was lot 356 in the catalogue of the collection of A. C. Zabriskie, sold by Henry Chapman, June 3-4, 1909. It was described as being Humbert's own specimen, and called a "Brilliant proof." At the Zabriskie sale it was purchased under the code name "Deem" for $360. This coin is now in the J. W. Garrett collection at Johns Hopkins University.

(3) Another specimen, similar to, but different from the last. This coin was lot 1058 in the Dec. 7-9, 1944 Stack auction sale of the J. F. Bell collection. In that catalogue the coin was described as follows: ..."Struck in Brilliant Proof. The original Augustus Humbert

piece sold to Capt. Zabriskie then to Col. Green and to Mr. J. F. Bell. This piece is absolutely unique in this condition." At the Bell sale it was purchased under the code name "Major" for $850. This coin is presently the property of Alfred Walter of San Francisco, and has been consigned to the New Netherlands Coin Co. for sale.

(4) 1852. Ten Dollars. AUGUSTUS HUMBERT; of the style of the two preceding. This was lot 358 in the Zabriskie catalogue of 1909. It was also described as being Humbert's own specimen, and called "Brilliant Uncirculated." At the Zabriskie sale it was purchased by Fink for $101. Subsequently, it found its way into the W. C. Newcomer collection, where it was called a "Proof," and the notation made that the "Overdate was not very plain." Newcomer paid $150. for this piece, and gave it his inventory number 2651. When B. Max Mehl handled the Newcomer Pioneer Gold coins he made up two lists. In one he called this Humbert owned coin a "Proof," and in the other, a "Semi-proof." As one or the other, it was sold to

Wayte Raymond for $150., December 14, 1933, the same day that Raymond purchased the Kosoff Proof USAOG twenty dollars.

(5) 1853. Ten Dollars. UNITED STATES / ASSAY OFFICE / OF GOLD. Allegedly from the Humbert collection. This piece has been described to me as being a "Semi-proof." It is also in the J. W. Garrett collection at Johns Hopkins University.

I have either examined the actual specimens of these coins or high quality photographs of them. All have been called "Proof" or "Semi-proof" at one time or another, as have the Franklin Hoard coins. Some, like the Franklin Hoard USAOG twenty dollar prooflike pieces show traces of die rust or minor pitting. Both those coins traced directly to Augustus Humbert and the Franklin Hoard coins appear to have been struck upon burnished planchets by lapped dies. The amount of planchet and die polishing and/or lapping varies from specimen to specimen in both instances, but the coins match up into remarkably parallel groupings. No coin from either the Humbert estate or the Franklin Hoard resembles a Philadelphia Mint gold coin proof by virtue of fabric, appearance or quality. If any coin did, I would consider its California origin questionable, and wonder if James Ross Snowden had it made rather than Augustus Humbert.

Those who have carefully read the report compiled by Newman will note several contradictions. One of these might be mentioned here. As I have said, on page 6 of the Inquiry Newman mentions coins "which have been cleaned or polished subsequent to striking." Yet on page 12 of the same document, in his glib explanation of how the Franklin Hoard twenty dollar coins might have been made, Newman says something else: "To make glittering coins from these dies the field can be polished easily because the design is recessed in the die and then polished or unpolished planchets may be used depending upon the sheen required." In both instances, Newman is speaking of the prooflike Franklin Hoard pieces, specifically, four of the six coins he studied. What process does he want us to believe was used? Does he know how the coins received their prooflike appearance, or is he grasping at straws, hoping that if totally different contingencies are mentioned, he is bound to be correct with one of them? Does he really believe he can have it both ways?

On page 8 of the Newman Inquiry we are told six Franklin Hoard twenty dollar pieces examined were struck in a collar producing 170 edge reeds. This, in comparison with regular production coins also examined by Newman, which were struck in a collar producing 162 edge reeds. Four pages later Newman tells us how a collar can currently be made: "If the edge of the coin is reeded a separate collar die must also be produced and an automatic gear hobbing or broaching machine can readily cut a shape needed to form it." On page 13 of the Inquiry, we are advised that the person otherwise capable of near miracles in the production of the Franklin Hoard coins was a failure in one area..."he must have failed to count the reeds on the collar of the original coin and cut a collar in a broaching machine with 170 instead of 162 reeds in it."

Newman's references to a 170 reed collar as evidence of different origin for the Franklin Hoard USAOG pieces is no proof, and is based on the false premise that Humbert's operation used only one collar with 162 reeds. The examination of any 1852/1 Humbert twenty dollar coin (including AH-100, the third Humbert prooflike item earlier described) reveals that a 150 reed collar was used to produce the (approximately) 7,500 examples of this type struck. One of the lead trials from the Franklin Hoard (Newman No. 24, my No. TGT/P-110) was struck in a collar with 148 edge reeds. According to Walter Breen, one of the two piedfort fifty dollar gold pieces in the Franklin Hoard (No. TG-121, which see) was struck in a collar having 173 edge reeds. Various U. S. twenty dollar gold coins examined have different edge counts. While an 1852 Philadelphia Mint piece had 162 edge reeds, later dates were found to have 169 and 172 reeds. San Francisco Mint examples dated 1856 and 1860 had 154 edge reeds, although coins dated 1855 and 1857 from the same mint had 155 edge reeds. Making a grooved or reeded collar in 1853 was easy, a skilled workman using only a triangular file could have produced one. Or, if available, a clockmaker's gear cutting machine could have been used. Regardless of how made, the only conclusion possible from my edge count studies is that different coining collars were produced as needed. Confirmation is available from other U. S. denominations: the 1876 "CC" twenty-five cents is regularly found with 119 edge reeds, as are surrounding dates, but a small minority of this issue exists struck from a collar having 153 edge reeds; the regular collar used on the 1921 Morgan silver dollar has 188 edge reeds, but three specimens seen out of a hundred have 154 edge reeds.[1] Franklin maintained from the beginning that at least his seven perfect prooflike USAOG twenty dollar coins were experimental pieces in different alloys and not regular issues. If they are indeed alloy trials would they have been struck with the equipment used for striking production coins? If they were made in that section of the Assay Office of Gold responsible for Essais, Experimental and Trial pieces, would not different manufacturing tools have been available?

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[1] The 1921 Morgan dollar with 154 edge reeds was discovered by Dr. W. Q. Wolfson and has been called the dollar struck with the "P.I.R." (Philadelphia Infrequent Reeding) collar.

I wrote Walter Breen many months ago for an enumeration of U. S. coins of which collar varieties existed within a single year. In reply, he sent me a two page listing.[2] I was surprised at the large number of Patterns and related items for which collars of different sizes (and thus invariably different numbers of edge reeds) were utilized. Newman suggests, on pages 13 and 14 of his Inquiry, that the edge reeds on USAOG twenty dollar coins should be counted "as the surest method to diagnose a $20 USAOG reproduction." Might I suggest that instead of identifying a "reproduction," that this eye straining chore be employed as a positive method of recognizing an experimental alloy striking?

In the first part of the next section of this paper I outline the steps alleged by Newman to have been used to fabricate the Garland (and other Franklin Hoard) coins. The third step described involves the use of centrifugally cast steel to make the actual dies from which the coins were initially struck. If obverse and reverse dies can be made by precision steel casting, can last ditch adherents of the Newman arguments explain why similar methods can not be used to produce a collar? Surely the occlusions and porosity inherent to cast steel would be less discernible on the reeds produced by a collar than on the surfaces of a coin impressed with cast steel dies. It requires a minimum of 110 tons per square inch, or a total striking pressure of at least 155 tons to strike a double eagle, according to E. V. Crane.[3] If Newman's cast steel dies could be hardened to withstand this pressure, why couldn't a cast steel collar?

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[2] Letter, with listing, Walter Breen, Institute of Numismatic Authenticators, to John J. Ford, Jr., February 13, 1967. (Appendix item No. 15).

Early in my reexamination of the Franklin Hoard material I photographed the edges of four USAOG twenty dollar coins, three of which originated with Paul Franklin. One photograph illustrates the reeding of USAOG-100, my silver strike from hub Group IX dies, and the reeding of USAOG-102, one of the two perfect prooflike pieces I retained from hub Group V dies. The second photograph illustrates the reeding of USAOG-114, the famous "Tobias" coin from hub Group VII dies, and the reeding of USAOG-116, a well circulated regular piece from hub Group III dies. The first three described were, of course, struck from collars having 170 edge reeds, the last from a collar having 162 edge reeds. In order to be in focus at the extreme focal length (distance between lens and film) at which these photos were taken, the edge of each of the two coins (in either picture) had to be on a perfect horizontal plane with its companion. Therefore, either pair of edge reed enlargements have been photographed at an identical degree of magnification. From careful examination of these four USAOG coin edges two important conclusions can be quickly reached. To begin with, the quality of the edge reeding shown does not necessarily suggest the precision tooling of a collar or collars by a modern "automatic gear hobbing or broaching machine." Secondly, it is quite obvious that two, possibly three, different collars were used to strike the three different Franklin Hoard USAOG twenty dollar coins enumerated. Are we also to believe that Newman's mythical forger made extra collars to add to his expensive collection of four different hubs, fifteen or more different working dies and four different alphabets, plus the multiplicity of other items he had to have to produce the Franklin Hoard material?

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[3] pg. 244, "Plastic Working of Metals and Non-Metallic Materials in Presses," E. V. Crane, Ph. B., M.E. Third edition, New York, N. Y. and London, England, 1944.

On pages 8 and 9 of the Inquiry, Newman discusses the USAOG twenty dollar coin owned by Herbert Tobias (his No. 6, my USAOG-114). It is believed that Tobias obtained this piece from Franklin directly, as it is not one of the five perfect prooflike specimens handled by the New Netherlands Coin Co. In describing the obverse of the Tobias coin Newman says that "under magnification...the right and bottom portions of the field...are completely filled with a large number of sweeping curved lines. These lines are very close together and are separated by identical distances. These lines are not arcs formed from the same center point but are a part of a perfectly uniform spiral or helix (sic) with the center point of the coin as a center." After describing the peculiar design on the Tobias piece, Newman goes on to explain how a lathe equipped with an automatic cross feed device works, and then reasons that the described spiral design could not have been in the obverse die from which the coin was struck, but could only of have been on the planchet of the Tobias specimen before it was struck. He finalizes this theory with a statement that "The planchet therefore was produced by a lathe in a most abnormal manner." Newman's tortured reasoning concludes with the inference (page 9) that the Tobias coin must be false, as its planchet could only have been produced by a lathe equipped with an automatic cross feed device, this component not being available on lathes in America in 1853. On page 13, he makes his inference a statement of fact as he describes the hardships of his alleged forger: "He seems...to have tried cutting the planchets on a modern lathe with an automatic cross cut mechanism."

Shortly after first hearing about an "automatic cross feed" device for lathes at the Arbitration Panel meeting in Chicago, I found myself browsing through a booklet titled: "A Short History of Machine Tools."[4] Two illustrations and their captions quickly caught my eye: on page 114, illustration No. 50 was captioned "Joseph Whitworth's automatic cross feed for lathes, 1835;" opposite page 117, illustration No. 53 bore the caption - "Lathe by Joseph Whitworth with automatic cross feed, 1843." Fired by these promising leads towards demolishing the positive Newman statement "based upon certainty," I wrote the publishers of the Machine Tool booklet in an effort to contact the author. Surprisingly, this gentleman, a Mr. L. T. C. Rolt, turned out to be an Englishman who had never visited the United States. He explained in a letter to me that he relied upon American printed sources for his U. S. references, and he referred me directly to the author of many of these, Robert S. Woodbury, Professor, History of Technology, Department of Humanities, Massachusetts Institute of Technology. In advising me to contact Professor Woodbury, Mr. Rolt told me he was considered a great authority on American Machine Tool history. I quickly verified this myself by visiting the nearest library of consequence, where I found that Woodbury had written the "History of the Lathe to 1850," for the Society for the History of Technology, in 1961, and was also responsible for many other references pertaining to machine tool history.[5] I wrote to Professor Woodbury, and we arranged an appointment to meet in New York City. When we got together, I explained the situation to him in considerable detail and briefed him as much as I could on the activities of the USAOG. It was a pleasure to talk to the Professor, as he seemed well versed in the technical aspects of coin production. When I showed him the pertinent pages in Newman's Inquiry pertaining to the use of a lathe he appeared greatly interested. Accordingly, I gave him a copy of the Newman Inquiry and a copy of the latest Whitman "Guide Book." Upon his return to M.I.T. Professor Woodbury applied himself to the contents of the Newman Inquiry and he and I entered upon a rather extensive correspondence.

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[4] "A Short History of Machine Tools," L. T. C. Rolt, The M.I.T. Press, Massachusetts Institute of Technology, Cambridge, Mass., 1965.

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[5] "History of the Gear-cutting Machine," R. S. Woodbury, Cambridge, Mass., 1958; "History of the Grinding Machine," R. S. Woodbury, Cambridge, Mass., 1959; "History of the Milling Machine," R. S. Woodbury, Cambridge, Mass., 1960.

Professor Woodbury wrote me several letters, two of which pertain directly to the Newman allegations concerning the Tobias coin and the use of a lathe in its production.[6] These Woodbury letters are highly informative and should be carefully read in their entirety, but I believe a summary of their contents and quotations from them will suffice to completely refute Newman's contentions and conclusions. Professor Woodbury's findings, observations, and conclusions are as follows:

1. He considered the possibility that the fine curved lines "appearing on the eagle face of (Newman) Coin #6 in a sector of approximately 30° to 200° from the vertical axis of the coin" could be either concentric or spiral. After examining several possibilities towards their being concentric lines, he concluded that unless

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[6] Letters Prof. Robert S. Woodbury to John J. Ford, Jr., December 2nd and 8th, 1966 (Appendix items, Nos.16 and 17).

"we have positive proof that these marks are concentric circles, we can reject that possibility."

2. In assuming that the curved lines formed part of a spiral, Professor Woodbury examined the possibilities that they "are portions of a spiral cut in either the gold planchet from which the coin was made or in the die blank by which it was stamped." Two paragraphs of his letter to me of December 8th indicate total disagreement with the Newman conclusion that the pertinent lines were made on the planchet of the Tobias USAOG piece (Newman No. 6):

> "The question then remains were they made on the planchet or on the die blank? To find these marks on the planchet used to make Coin #6 we would be forced to assume that the gold was worked into a cylinder of diameter at least as great as that of the planchet, a disc cut off and then faced with a lathe. In view of the practice since Da Vinci's day of producing the planchet by punching from a bar of gold of the requisite thickness and the extreme unlikelihood of anyone hammering out, drawing, or rolling a cylinder of gold of these dimensions, we can safely reject this possibility.

> The other, and by far the most certain explanation, -- one which fits all the facts to be found on Coin #6, the facts of tool technology, the facts of tool history, and the logic of unspeculative common sense is that these marks were made in facing-off the end of a steel cylinder for a die blank. This would be done on a quite ordinary and common lathe using hand control of the mechanical cross feed. This cylindrical piece, contrary to usual practice, was then smoothed and perhaps polished on only part of its face, before the die was impressed. The remaining tool marks would then be reproduced exactly as found on Coin #6."

3. Professor Woodbury, because of his primary interest in machine tool history and technology, took exception to the Newman assertion relative to the uniformity of the curved lines on the Tobias coin. In his letter to me of December 2nd, he wrote:

> "Mr. Newman goes on 'This design is so perfect that it had to be produced on a lathe and could not be cut by a skilled hand in 1853 or now.' Here he has gone beyond his competence. Such a

> design CAN be produced by even a reasonably skilled lathe operator now, and was being produced as early as 800 B. C. (See my 'History of the Lathe to 1850') Any competent lathe operator since Maudslay's time can back off his cutting tool by uniform hand rotation of his cross feed control to produce this order of accuracy. Newman's statement here is not only 'speculation as to fact'; it is not 'based on certainty.' In fact it is based on ignorance of common machine tool practice now and in the past."

4. The Newman argument in attempting to show that a lathe with a automatic cross feed was required to produce such a pattern as that found on the Tobias coin concluded (on page 9) in typical Newman climactic style with the positive statement that "In 1853 the automatic cross cut device was not available on lathes in America." Professor Woodbury, probably the foremost authority in the United States on what machine tools were in use a century ago, also took exception to this Newman assertion. In the same letter of December 2nd, he said:

> "Here we have a categorical statement presented as based upon certainty, but in fact not at all based upon historical evidence. ...There is clear evidence

> (British Patent #6850) for automatic cross feed as early as 1835 and this feature was clearly embodied in an illustration of lathes offered for sale by Whitworth in 1843. Whitworth's firm was exporting these lathes all over the world. It is impossible to believe that this 'device was not available on lathes in America' in 1853. American manufacturers at this time were so far ahead in their technical methods that a British Commission (of which Whitworth was a member) came over in 1855 to study them. These methods were imported into England (see Nathan Rosenberg 'Great Britain and the American System of Manufacturing,' Edinburgh U.K. 1966). Surely either Robbins & Lawrence in Springfield, Vt. or the Colt Armory, Hartford, Conn., or Brown & Sharpe, Providence, R.I. had such a tool. At the New York Exhibition of 1853 Whitworth lathes were exhibited. There is every reason to believe that such a lathe was available in the United States in 1853."

Professor Woodbury, on the second page of his letter to me of December 8, 1966, describes exactly how the curved line marks on the obverse of the Tobias coin were made. He discounts the need for a lathe with an automatic cross feed device (even though it was, as we have seen, undoubtedly available), and suggests (as I have said) that an ordinary lathe with mechanical cross feed was used. Since his exact description of the only two ways that the lines on the Tobias coin could have been put there completely explains their presence, I again quote from the Woodbury letter of December 8th:

> "These lines on Coin #6 would be recognized as either those left by a cutting-off tool or those left by facing the end of the bar of stock to get a surface flat and perpendicular to the axis. When a bar of stock, presumably cylindrical, has a disc cut off from one end of it (the bar being held in a conventional chuck and not between centers), it is done by a tool with a narrow cutting edge parallel to the axis about which the bar of stock is rotating. The corners of this tool leave just such fine marks as are seen on Coin #6, and would be spiral. The same marks would be left by a facing-off tool. Since the cut in the latter procedure is light and usually made from the center to the outer circumference, it would be easier to do the work with more accurate spacing of the spiral lines in this manner. So of the two possibilities I believe

> that these marks were more probably made with a facing-off tool on a lathe with mechanical, but hand controlled cross feed."

We have seen that Newman is consistent. He sticks to his absolutely fallacious basic premise that only one working die is made and used when a working hub is sent to a branch mint (or its equivalent). He has convinced himself that since the lines found on the obverse of the Tobias piece were not to be found upon the obverses of the other Franklin Hoard coins available to him, that they had to be on the planchet of the Tobias coin. Why didn't it occur to Newman that the obverse die used for the Tobias coin could have been discarded, and another quickly made? Or why didn't he think about how easy it would have been to just simply polish away the light curved lines on that obverse die? Professor Woodbury mentions this last probability, and discusses why the curved lines were not removed entirely from the die blank before hubbing, in the last paragraph of his letter to me of December 8, 1966.

Newman, in discussing the marks on the obverse of the Tobias coin, stated: "...I am unaware of such a marking on any other coin of any type." He might be, but I am not. Evidence of die blank spirals can be found upon several large cent obverses of 1802 and 1803, and on the obverse of the 1854 ("1851") experimental Liberty Seated cents in german-silver, etc.[7] (although for different reasons). Spirals similar to those on the Tobias coin are also demonstrable on an 1862 Half Anna of India, a rarity struck in gold from the Brand collection.[8] They are found in the obverse bust of Queen Victoria, commencing at a point at the top of the braid below the ear. They are not to be seen in the field, since the coin is a brilliant proof, the spiral marks there having been removed when the face of the obverse die was polished. Professor Woodbury examined this piece and enlarged photographs of its obverse (USAOG-118, reference), and wrote me a letter in which he expressed his opinion concerning it:[9] "...it is my firm opinion that these lines are the result of essentially the same methods in preparing the dies used for the Coin #6 $20 USAOG. The reasons for doing this kind of work may, of course, have been quite different in India from those in San Francisco, but the techniques and the results are the same. ...This 1862 Victoria Half Anna then definitely shows that the lines on Coin #6 $20 USAOG are by no means unique, and that Newman's statement on page 8 of his 'Inquiry' that he is 'unaware of such a marking on any other coin of any type,' carries no weight at all in the question of the authenticity of Coin #6 $20 USAOG."

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[7] See Adams-Woodin Nos. 146, 148, 149; Judd Nos. 156-159 inclusive.

In order to double check my feeling that the lines on the obverse of the Tobias coin were on the die blank before

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[8] Virgil Brand collection, inventory No. 124475. Purchased by Spink's as lot 159, first day's sale, coll. of John G. Murdoch, July 21, 1903, Sotheby, Wilkinson & Hodge, London.

[9] Letter, Prof. Robert S. Woodbury to John J. Ford, Jr., January 30, 1967 (Appendix Item No. 18).

[illegible] London ([illegible]; USNM-[illegible]). [illegible] a reply concurring that the Chief Engraver [illegible] with my contention.[10]

On page 9 of the Inquiry Newman [illegible] 2, 3, 4, 5, 6 and 7 [illegible] diffraction and the photographic prints have been [illegible] to show that the planchets for coins #5 and 7 were cast [illegible] than drawn while the others were not cast. The photographic results show a much greater dispersion of the rays passing through #5 and 7." Newman has here made an erroneous conclusion predicated upon his lack of understanding of the practical usage of X-ray diffraction in numismatics.

Both X-ray diffractometry and X-ray diffraction are generally used in numismatics to ascertain the amount of surface stress which the metal of a coin has undergone as a result of striking. The amount of pressure exerted upon a planchet while it is being stamped determines its surface stress characteristics. The analysis of these surface stress characteristics makes X-ray diffractometry or X-ray diffraction a valuable method to differentiate a cast coin (with a near perfect surface) from a struck piece. The cast coin possesses no appreciable stress characteristic as a result of its molten metal cooling, whereas the struck piece, in comparison, possesses substantial stress deformation due to the huge striking pressures and consequent work hardening of the surface metal. X-ray diffraction involves the same basic principles as X-ray diffractometry, but with X-ray diffraction a special camera is used instead of a detector, and the diffracted rays are recorded on film instead of being read on a scale.

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[10] Letter, G. P. Dyer, Royal Mint, London, to John J. Ford, Jr., February 16, 1967 (Appendix item No. 19).

Believing that the coins from Paul Franklin were in reality experimental alloy strikings, I had a suspicion that Fuld, and then Newman, misinterpreted the differences shown by the Fuld X-ray diffraction tests on two Franklin Hoard coins and a group of three regular USAOG twenty dollar gold pieces used for comparative or control purposes. With this thought in mind, I gave a copy of the Newman report to a friend of mine, Theodore L. Craige, and asked him to look it over. Mr. Craige has been a professional, practicing engineer for thirty years, and is currently Director of Engineering of a division of "TRW" (Thompson, Ramo, Wooldridge, Inc.). He and I have often discussed and sometimes jointly worked upon problems concerning numismatic metallurgy. Many of these problems involved questioned items, or were matters related to coin authentication. I have learned much from Craige, generally in the unexplored areas of metal deterioration such as galvanic reaction, and have high regard both for his professional ability and numismatic knowledge. I could think of no one better equipped to tell me if the interpretations given the Fuld tests could have been incorrect.

To assist Craige at arriving at a correct evaluation of the announced results from the Fuld X-ray diffraction photographic prints, I made all of my Franklin Hoard and other USAOG coins, pictures and papers, available to him. He studied the material leisurely for some time, and then wrote me his conclusion.[11] His general observations concerning the Newman Inquiry as a whole were hardly complimentary, but it is his specific analysis of what Newman had to say concerning the Fuld tests that I would like to quote here: "... I am concerned lest X-ray diffraction by the reflection method be looked askance at in the future, because of this erroneous report, and, therefore, would like to absolve it by commenting on page 9, paragraph 2, of said document." The Craige comment concerning the Franklin Hoard USAOG twenty dollar gold coins is as follows:

> "All planchets are derived from casting the gold alloy into slabs called ingots, the size and thickness of which is determined by the quantity of gold needed. Since this was experimental work and not production work, probably small batches of each gold alloy were carefully prepared and then melted and cast into small thin ingots. Pure gold is soft; it is hardened by alloying and 'cold work' (such as rolling or striking). Copper is a hardener added to gold

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[11] Letter, Theodore L. Craige to John J. Ford, Jr., July 15, 1967 (Appendix item No. 20).

coins to make them more durable in circulation. The gold alloys used here contained various copper content, including none, and, therefore, when cold rolled to thickness 'worked' differently. Some ingots required much more cold rolling to final thickness than others; thus the grain size of the former was smaller than the latter by virtue of the metal being more compacted by additional working. Accordingly, we should expect to find planchets with varying degrees of grain size--fine to coarse.

All planchets prior to striking have to be heat annealed to make them sufficiently soft to minimize coining pressures and die damage and to prevent the struck coins from cracking. This striking of the planchets by obverse and reverse dies, together with the expansion of the flan edge into the reeded collar, work hardens the coin, especially in surface and near surface areas. Where coin thickness (as in this case) is appreciable, compared to the imparted 'Design Relief, most of the metal deformation and flow is in these aforementioned areas. The section deep within the coin is not appreciably affected by normal coining pressures and is, for the most part, of grain structure dependent on its prior history, i. e., cast ingot to final reduce thickness chronology. Since different alloys required different degrees of rolling and, hence, possessed varying grain size, the struck specimens also possessed varying internal grain size particles.

X-ray diffraction by the reflection method was used to draw an erroneous conclusion. This method, under favorable circumstances, can be used to measure the stress deformation imparted to a struck coin at its surface and near surface areas.[11a] However, when the grain structure of the specimen is relatively large, or coarse, the X-ray diffraction rings show a much greater dispersion, making the stress determination most impossible![11b] This is why line 2 of paragraph 2, page 9, says: 'and the photographic prints have been interpreted to show that the planchets for coins numbers 5 and 7 were cast, etc.' Therefore, the X-ray diffraction method is inapplicable for those experimental coins with coarser grain structures, except to prove that they had comparatively coarser grains than other specimens by virtue of their prior history."

[11a] "In back-reflection measurements, particularly with the strongly absorbed long-wavelength X-rays commonly used, the resulting information is largely confined to the surface properties of the sample." (From) "X-Ray Studies of Materials, A. Guinier and D. L. Dexter, New York & London, 1963" (Appendix item No. 21)

[11b] ibid. Page 101: "...if the sample were composed of rather large grains so that the lines are punctuated, it would be impossible to determine the position of maximum intensity of the ring with the required precision" (Appendix item No. 22).

Craige concluded his letter with the thought that "...X-ray diffraction is an excellent tool when properly used. To do so, its limitations must be carefully considered." This remark is quite relevant, and penetrates to the heart of the current situation. Very few collectors or dealers have had actual experience with X-ray diffraction or any of the other scientific tests available to numismatics. Others have heard about them, but have only a vague idea of just what each test can or cannot do, or how specific tests can be applied to particular situations. For the unconversant always in seek of a quick panacea for the illnesses plaguing our hobby, and the sophomoric "Pseudo Expert" who cleverly drops test terms in his conversation, a little knowledge can indeed be a dangerous thing. Scientific tests are but tools, and as such are only as good as those interpreting them. In turn, those interpretations have to be evaluated by those with extensive numismatic knowledge and experience. Unfortunately, there is no such thing as all-inclusive numismatic knowledge, and thus such evaluations must be made by someone who has long specialized in and has intimate cognizance of the narrow field being studied.

In closing this examination of the substance and peripheral contentions of the Newman Inquiry, I am reminded of a sentence in the final paragraph of one of Professor Woodbury's letters to me: "In short, Newman is asking us to believe an elaborate series of arguments, each of varying degrees of doubt or impossibility, but taken as a whole absolutely preposterous."

THE NEWMAN ARGUMENT - HOW THE FRANKLIN HOARD COINS WERE MADE

The peripheral contentions of the Newman report seemingly serve as adjuncts to the heart of his Inquiry - how the controversial coins were manufactured. As earlier mentioned, Newman examined six Franklin Hoard pieces. Three of these, his Nos. 6, 14, 15, he contends were struck by the forger from a cast die made from a cast ceramic hub (mould) fabricated from a wax (or similar) impression taken from a genuine (Group X) coin. This piece would show (among other characteristics) the reverse chip at T of UNITED and the tablet break at right from the first A and S in ASSAY to L of GOLD to the second C of FRANCISCO and below. It would also have a reverse tablet frame line dent centered under the lower vertical serif of the F in CALIFORNIA. Following the striking of his Nos. 6, 14, 15, Newman tells us that the forger attempted to improve the quality of his working dies by removing the chip at the T and almost all of what can be called the "circumferential" break at the right. Following this, we are told that (Newman) Nos. 5, 7, 16, were struck. These are the steps that Newman believes the maker of the Franklin Hoard coins used:

1. A wax, latex or plastic mould or negative was made from the coin, presumably by impressing it into a thick disk of the receptive substance. Obverse and reverse impressions would be needed and made separately.

2. These wax, latex or plastic negative impressions were independently repeatedly dipped into a ceramic slurry, withdrawn for drying between dippings, and the resulting thick layer of ceramic material baked to harden it, and, incidentally, to melt, burn off or vaporize the negative mould (traditional "lost-wax" method). This would leave a ceramic hub or positive for both obverse and reverse, which would be in relief like the original coin, and supposedly hard enough for the next step. Miraculously, we are led to believe that there was no shrinkage and no size discrepancy from thickness of the separating medium if any.

3. The ceramic hubs were used as templates for centrifugally casting working dies of molten steel (or some other hard metal), which cooled and were afterward hardened. There was, even more miraculously, no evidence of die granularity, porosity or shrinkage.

4. The dies were polished and new coins (of the Group VII type) were struck. Undoubtedly, these were on traditiona cold-rolled blanks (which the exception of Newman No. 6 already discussed).

5. After manufacture of the dies and the Group VII coins, the reverse die was stamped into a die blank to raise a new hub, presumably of steel. No mention is made of the type of steel

used for this hub or of the striking pressure required to raise it, or of the metallurgical techniques involved in creating it.

6. After proper preparation, the Group VII hub was retooled by removal of the chip at the T and most of the tablet break at right.

7. A second working die was sunk from the altered hub, polished, and in the process of polishing suffered a nick on the upper right side of the N in UNITED.

8. Using the new reverse die, additional coins were struck (of the Group V type) lacking the chip at T of UNITED and most of the tablet break at right. Two of these are alleged to have been struck upon cast blanks (Newman Nos. 5, 7).

I have been told that the maker manufacturing contentions in the Newman Inquiry are more than a little confusing in their presentation. As enumerated above they are far from complex, and in reality represent a simple, pat solution to the forgery charges made by the Study Group (if one overlooks the numerous technical faults and failures inherent to the processes given). However, in spite of the intrinsically simple nature of the basic Inquiry manufacturing allegations, it is imperative that they (and their ramifications) be clearly understood before an attempt can be made to follow my comments and explanation of this main phase of the Newman argument. With that point emphasized, let us examine more carefully some of the die and striking characteristics mentioned in the Newman report, page by page. (All future references are to pages of the Newman report).

On page 6: a "rice shaped raised lump under the right arm of the T of UNITED" is described as having "probably occurred during the abrupt temperature drop in hardening the steel die by immersion in liquid when heated." The suggestion is thus made that this chip is to be exclusively found on a working die. This is not the case; it is not just on a working die or dies. It is found on coins from the Franklin Hoard source and on coins not traced thereto and on isolated impressions of the tablet alone on bars. The listing of USAOG coins that is available establishes this in detail. A feature found in common on impressions from demonstrably different working dies cannot have been a result of accident to one of them but rather must have come from a much earlier stage, and as I have already said, this defect was in the original tablet puncheon negative (or matrix) used in making at least four and possibly five working hubs. This anticipates part of the argument given in a subsequent part of this refutation.

Also on page 6: Newman mentions what he describes as a diagonal die scratch in the obverse field just right of the second A in AMERICA. Later in his report (page 13) he claims that this scratch was accidentally made by the maker of the Franklin Hoard twenty dollar coins and is thus distinctive to them. He calls it a "tell-tale" mark of the allegedly forged obverse die. If this is a scratch on a working die, it would not be found on any impressions from other dies. Careful examination of the non-Franklin Hoard Proof, the Seavey, Ulex, Proskey, Newcomer, Raymond, E. H. R. Green, Bell, Farouk, Kosoff coin, Newman number 12 (USAOG-123), reveals a faint, mostly effaced, mark identical in direction and extent. With the diagonal die scratch on this coin, we can only conclude that the scratch was in the hub, therefore in relief, therefore originally in the matrix from which the hub was raised. As earlier explained, this particular Proof does not have the physical characteristics of normal USAOG twenties; it is in fact in some ways even more of a deviant than the Franklin Hoard proof surface coins. Humbert's dies were never so drastically lapped or worked on as were those used to strike this piece.

While Newman could not see evidence of the obverse diagonal die scratch just right of the last A in AMERICA on the Kosoff Proof (his No. 12), he also did not notice its absence on two lead trials that I had obtained from Paul

Franklin, and which I sent him for examination, although he calls it a "tell-tale" mark and claims that it appears on the obverse of all Franklin Hoard pieces. These lead trials show two slightly differing states of an unpublished obverse intended for a fifty dollar piece. They have a large 50, the 0 not double-punched; (Newman Nos. 24, 25; my Nos. TGT/P-110, 115). The same diagonal field scratch just right of the second A also does not appear on three USAOG gold fifty dollar pieces, all of which have the 0 (in the denomination) double-punched. One of these is on a very broad planchet with a reeded edge; it has a small tight target reverse and no reverse legend, and is presently in the Lilly collection. The other two are piedforts; (see TG-121, 125). All three are, of course, also Franklin Hoard coins, and together with the two lead trials mentioned, dispel the Newman "tell-tale" mark contention.

On page 7: Newman makes much of a dent across the upper part of the I in UNITED on the obverse of the Franklin Hoard prooflike coins, stating "the dent is not found on other coins." Newman has here committed a major blunder, affecting his own line of reasoning and invalidating his conclusion. He assumes that this obverse dent was on the unknown prototype piece used by the maker of the Franklin Hoard coins with his die casting process. It is my contention that the dent across the upper part of the I in UNITED was on a working hub from which several working dies were made. Instances of dents to hubs are known on United States coins.[1]

All the evidence required to show that the dent on I of UNITED was in a working hub is to locate coins from demonstrably different working dies sharing the dent on I. Newman says none exist. He has erred here and the subjoined listing shows several such coins, most significantly including two that have no connection with Paul Franklin. Both of these coins are from hub Group X, the latest matrix state known with additional circumferential breaks at left as well as evidence of the reverse frame line dent below F. One is USAOG-107 (Group X-1), photos from Smithsonian negatives 102a, 102b. It was obtained by the National Museum prior to 1957 as a regular USAOG twenty dollars. The other piece that I can cite is USAOG-126 (Group X-2), a regular USAOG twenty dollars selected from a large group of coins from Stack's stock. The obverse dent on the I of UNITED is also found on the two fifty dollar round obverses and on the two hundred dollar bar (from the Franklin Hoard, which see): (1) that showing 50 D. with the zero double-punched; (2) that with normal zero; (3) that with no denomination but blank space and D. (TG-114, lead TGT/P-110 or Newman No. 24, TG-113: photographs of these pieces are displayed as evidence.)

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[1] All half cents from 1840 through 1857 are from working dies (differing in dates and other details imparted by hand) sunk from a single obverse and a single reverse hub. Before the single obverse die was made for 1841 the obverse hub received a wedge shaped dent on the hair below the ear. All half cent obverses from 1841 through 1857 show this identical dent, though that for 1854 shows it corrected with fine hair, this having been added to the working die in that area. Before the small berry regular reverse half cent die was made for 1849 the hub received two small cuts on the upper wreath above HALF, and these cuts show on all subsequent reverses. The half dimes of 1840 (with drapery) through 1858 inclusive are all from working dies made from a single obverse hub. Chips out of the matrix between the stars resulted in raised marks on the hub; some of these were partly effaced on various working dies and show smaller or more faintly on the coins struck therefrom. Dr. Valentine's monograph on half dimes (A.N.S., NN&M #48, 1931) points out that in early 1857 the hub, having become badly worn (after manufacturing several hundred working dies, according to Walter Breen's discovery of die accounts for the period in the National Archives) was retouched. The working dies made from the hub after retouching differ in hand finishing details as usual, but the coins struck from all such dies now show a dent on the inside point of the 3rd star. As this dent is incuse on the coins, it must have been raised on the working dies, and the cause is obvious - it was incused on the hub, representing an injury thereto.

The appearance of one and the same dent on a coin long in the Smithsonian Institution, on a piece picked at random from a dealer's stock, and on four demonstrably different obverses of Franklin Hoard Coins, is good evidence that they were from working dies having one and the same hub as prototype. A hub is in relief like a coin. A depressed dent could have been inflicted to a hub, in which case the working dies sunk from the hub would show it in relief, and the coins struck from the working dies in turn would again show it as depressed. Variation in the depth of the dent (and thus in its appearance) would reflect either different force used in sinking the working dies or in striking the coins, or else in some instances retooling of dies to minimize such injuries.

Top of page 13: Newman states that "the nicks on the original coin were transferred to the false die and were not noticed but were too difficult to remove if they had been." As we have just said, the nick or the dent on the I of UNITED is depressed on the coin; therefore, it would have to be raised in relief on the die. If anything would be easy to remove from a die, it would be such a nick or dent. Clearly, Newman is in error.

Last ditch adherents to the Newman argument might ignore the contention that the dent at I of UNITED might and can vary in appearance. To quickly prove my point, I would like to refer them to both USAOG-103 and 104, upon each of which the dent at I of UNITED is hardly discernible. These, of course, are Franklin Hoard coins, and, interestingly enough, are from entirely different reverse hubs (Groups IX and V).

Page 7: The remainder of Newman's argument is utter chaos. He argues from what I have called the "circumferential" break (on the right side of the reverse tablet) that only a single reverse working die was involved. By his theory, two different working dies cannot crack identically, with which there can be no disagreement. By his theory, a raised crack has to be from a crack suffered by a working die; therefore if a coin from a demonstrably different working die shows the identical crack in any state, it must be an impression from a copy die using one of those coins as a prototype. By his theory, then, all normal USAOG twenty dollar coins must have come from different states of one and the same working die. By his theory, the absence of the chip at the T or the tablet break at right on Franklin Hoard coins of Group V, and presence of both the chip and crack on the Franklin Hoard coins of what I call Groups VII, VIII and IX, while the dent below F in frame line occurs on both classes, represents an impossible combination pointing to the manufacture of copy dies, viz. counterfeiting. The necessary and sufficient solution to this "impossible combination" problem is something not considered by Newman. The circumferential crack at right was not from an injury to a single working die, but rather progressive states of breakage of a matrix from which at least five working hubs had been raised. Dies were sunk from four of these hubs and used to strike coins. Two of the hubs show no trace of the break at right; the other two do. The circumferential break is found fully formed on the numerous coins examined or it is not there at all. No progressive partial stages are known. Coins showing progressive deterioration of a single working die can normally be arranged to show numerous intermediate states of the breakage. There are regular USAOG twenty dollar coins representing many obviously different working dies from hub Group II, III, IV (without break at right) and hub Group X (break at right, additional breaks at both left and right). The differences in these working dies from these hubs (as detailed in the subjoined listing) are identifiable as from hand finishing, of much the same kind as the differences between any single cent reverse and other cent reverse of the 1844-57 period, or from damage to the working dies from use.

Total refutation of the specifics of Newman's argument is not difficult. Presence of the identical reverse tablet frame dents (below F of CALIFORNIA, centered above E of UNITED, an oblique one above the left top serif of Y in ASSAY, and others) both on Franklin Hoard and non-Franklin source coins points to a common origin in an original hub or even an original tablet puncheon (raised or positive). This is in itself strong evidence of genuineness. Whoever made the dies for the Franklin Hoard coins had access to original equipment and did not need any such crude procedure as that of casting dies.

I have already said that the reverse tablet break at right was in the matrix, showing as raised on the working hubs, therefore as incused lines in the working dies sunk from these hubs, therefore as raised breaks on the coins struck from them.

The raised spur projecting angularly downward and to the right from the right end of the right base of the first A in ASSAY has nothing to do with the tablet die break at right but occurs on both Franklin Hoard (Group VII, VIII, IX) and non-Franklin source (Group X) coins with the break, and on Franklin Hoard (Group V, VI) items without the break. The lump atop the first A in ASSAY is a chip (or more likely a heavy rust pit) transferred by one working hub (Group VII, VIII, IX), and is different in direction from the crack from this A to the upper frame line. The chip between the first S of ASSAY and L below is also not part of the circumferential tablet break at right. It is found on Franklin Hoard (Group VII, VIII, IX) and non-Franklin origin (Group X) coins. It is also found upon the tablets impressed into assay bars, Proofing pieces, and other USAOG items. These tablets were cut down from regular Group VI working dies. The circumferential break in the original matrix happened to pass through the lump between S and L even as it had grazed the spur from foot of first A of ASSAY.

Reference has been made to hub Group categories and the statement made that the circumferential crack on the reverse tablet at right appears on coins from two of these groups only as a discontinuous element of a working hub. This is true, but reverse hub "C" (found only on cut-down Group VI dies, i.e. in tablet form only) does show a minute rust spot high in the field between the 1 8 (of date), which, under a binocular microscope, shows the faintest beginnings or traces of a break commencing upwards towards the C in CALIFORNIA. The basic reverse characteristics of these hub Group categories or classes (from known impressions in gold only) are as follows: (order given is that of probable hub use, not that of hub manufacture)

Hub Group	Chip at "T"	Break at right	Frame spur A-period	Denticle break 3:30 reverse	Chip r. edge l. upright "N"	High N chip r. edge r. upright	Spur r.foot first A	Spur out top firstA	Chip be- tween S&L	Ne brea l. &r
II										
III	Yes	No	Yes	No	No	No	No	No	No	N
IV										

Reverse hub "A". Probably 2 working dies, possibly more of II; only 1 found of III; many of IV. A Group II coin, USAOG-105 (photos from Smithsonian negatives 101a, 101b, Mint coll. No. 1625) shows tablet frame line dent below F, as do some working dies of Group IV but on most hand finishing has obliterated it. Non-Franklin origin only.

V	No	No	Lump only	No	No	Yes	Yes	No	No	N

Reverse hub "B". Possibly 2 or 3 working dies (coins TG-121 $50. Eagle; TG-126 $21.05 and TG-117 $44.77, Target, F-3 and F-1 obverses, appear to have different reverses on the photographs available), but faint cracks at 2:00, 5:30, 6:30 o'clock radially, engine turning to border, on all seen (matrix cracks?). Tablet frame line dent below F varies in shape, depth (and thus appearance). Die (or dies) lapped, particularly at right side of tablet, which presumably gave Newman his erroneous idea that he was looking at an altered copy idea. Franklin Hoard only; prooflike.

VI	Yes	No	Sometimes visible	--	No	No	Yes*	No	Yes	N
	Reverse hub "C".	At least 5 cut-down working dies (some showing part of tablet frame line or border). *The spur from right foot of A is quite minute on this Group, and on one or more of the working dies appears to have been removed from the hub. On one Proofing piece (USAOG-P) the tablet frame line is generally intact, and the dent below F in CALIFORNIA is very prominent. Franklin Hoard only; mostly not prooflike.								
VII										
VIII	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	
IX										
	Reverse hub "D".	Possibly 2 or 3 working dies known. Confirmation of this is a subject for future investigation. Wide range of states and strikings indicating prolonged use of the working dies over a considerable period of time. (Lead trial pieces exist of Group VII with break at right seemingly removed from the hub; one has the spur from right foot of the first A in ASSAY also lacking.) Coins from VII prooflike, less so than V; coins from VIII more or less double-struc not prooflike; coins from IX represent latest die state known, not as prooflike as previous coins. Franklin Hoard only.								
X	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	
	Reverse hub "E".	Additional hub circumferential and other breaks at left and right. Detailed analysis of six Group X coins (exhibit drawings C-1, C-2, C-3) suggest that a sixth hub might have been used and certainly that many working dies exist. Non-Franklin origin only.								

We have said that the obverse dent on I of UNITED and the reverse dent on the frame line below F occur on both Franklin Hoard coins and those of non-Franklin origin. Both are found on hub Group X coins (X-1, USAOG-107, X-2, USAOG-126).

Page 14: Newman states: "Somewhere there is a beautiful genuine $20 U.S. Assay piece 900 fine which has the obverse dents and the reverse dents identical to those found on the coins from the Humbert Associate Source. It has the extended die break on the reverse. It has the lump under the T of UNITED. It is the piece from which the molds and dies were made to strike the Humbert Associate Source coins." Clearly, Newman thought that a top quality Group VII coin was used as the prototype. *No such coin from a non-Franklin source exists*. If a prototype was used to make cast dies, it could only have been a Group X coin. Are we to believe that the highly complicated six step transfer process (including the raising of a hub to remove break evidence) that Newman says was used to make corrected copy dies was performed *twice*? (A Group X coin to make Group VII, VIII, IX coins, a Group VII die to make Group V coins!) If so, for what possible conceivable purpose? How were the hub Group VI tabl impressions made? Was more than one Group VII working die made? Where did all the rust defects come from on the Group IX coins? If a Group VII die was used to raise a new hub and the chip at the T and most of the tablet break at the right removed (as Newman claims), how did the maker perform the incredibly difficult (if not impossible) task of removing all traces of the complex reverse denticle break at 3:30 o'clock without leaving the slightest evidence of his handiwork on Group V coins? The small raised horizontal projection or spur from the upper right edge of the right upright of N in UNITED is not found upon hub Group X coins. Neither is the similar projection or spur on the right edge of the left upright of the same N. Yet the latter appears on hub Group VII coins, disappears on the hub Group V coins and is replaced by the Newman touted high chip, projection or spur on the right upright of N! Neither exist, one appears, disappears, another appears...but no mention is made of such phenomena. Admitted lack of knowledge of the hubbing process and the confusion of different dies can be the basis of almost any conclusion one could imagine, but it is not a sound basis for truth.

Page 10: Contentions already presented relating to the raising of five or more working hubs from a matrix suffering breakage, and the sinking of many working dies from these hubs, destroy Newman's paragraph beginning "This is conclusive evidence ..." Since Newman's entire technical case against these coins is to date based on the argument that only one working die was involved rather than several working dies from at least three of five working hubs, with this refutation his case collapses and the coins be presumed genuine.

Pages 10 and 11: As I stated earlier, late in 1964 I sent Newman, at his request, six lead trial pieces of the USAOG that I had obtained from Paul Franklin. He gives them his Nos. .. 20 through 25. His description of them in his report is cursory, and he hastily mentions the fact that five of them have unpublished obverse dies. Since new type obverses do not readily fit into his theory of copy dies fabricated via casting (which require a genuine prototype coin for the first step negative mould), he devotes a short paragraph (page 12) to this minor problem, solving it by suggesting that coins with new type designs or other components can be made via an involved six step process. Encouraged by the ease with which he disposed of the complexities of creating unknown coin types, Newman concluded that four of my six lead trials were struck using a reverse die that was indirectly made from a coin which bore a stage of the crack at right and which thus was (in his opinion) an example from a used production die. Here again we have the repeated Newman error that only one working die was involved in the manufacture of millions of coins. The premise of this basic error is such that he felt compelled to state: "This therefore is a strange set of trial pieces since the reverse die had already been used for production and the die had extensively cracked before the lead trials were made."

Some pages back I said that Newman Nos. 24, 25 (my numbers TGT/P-110, 115) show two slightly differing states of an unpublished obverse intended for a fifty dollar piece. This obverse has the characteristics of the Franklin Hoard Twenty Dollar obverses, the dent on I of UNITED, and a trace of a rust mark (?) below the ribbon at left, but lacks the field scratch at last A in AMERICA. Instead of TWENTY there is a large 50, the 0 not double-punched and lacking the small die chip at its upper left. The first of these mentioned is struck upon a very broad flan (the size of a fifty dollar gold piece) with a reeded edge (148 reeds) and a border on both sides composed of large denticles. The reverse is otherwise blank except for two circular guide lines, the upper one of which has MOFFAT & CO (no period) struck in relief above it. The lettering is of identical style to that on an ex S. K. Nagy estate (non-Franklin) and doubtless authentic large lead ingot die trial (which see) reading AUGUSTUS HUMBERT ASSAYER around, ---Thou^{s} on scroll, MOFFAT & CO (no period) within, ---D ---C (spaces left for inserting value) below. The other mentioned, from a minutely different state of the identical obverse, is uniface. The maker of this obverse die clearly had access to a hub from which he made one die with TWENTY D., two with 50 D. and one with a blank space and D. (TG-113, which see). Since this same hub with the dent on I of UNITED and without the diagonal die scratch in the field just right of the second A in AMERICA is found on various dies of the regular 900 THOUS. issue (hub Group X), obviously a link is established between the maker of the Franklin Hoard coins, of these lead pieces, and of regular gold USAOG twenty dollar coins. The amount of original equipment which must have been in the possession of this unknown alleged forger increases with every piece studied, and the end is not yet in sight.

The other three lead trial pieces with unpublished obverse dies, Newman Nos. 21-23 (my Nos. TGT/P-111, 112, 113), about which Newman complains on the premise that they were made from an old broken production die, mule two different reverse working dies of the hub Group VII type (denticle break at 3:30 o'clock) which lack the circumferential break at right with two obviously different obverses of round ingots intended for various denominations. These obverses are of the types hereinafter called F-2 and F-3, and impressions from these identical dies are known in California gold. (The two reverse working dies lacking the break at right are mentioned in the paragraph concerning reverse hub "D" but their characteristics are not listed in our tabular breakdown for hub Group VII, VIII, IX as that listing only includes examples in gold.)

Page 11: Before leaving the subject of the six lead trials from the Franklin Hoard, Newman referred to the reverse of four of them and made an interesting observation: "Comparing this to another lead trial of a $20 USAOG reverse which has been in a museum for about fifty years it is noted that the latter does not have the dent in the frame line and does not have the die break found on the Humbert Associate Source lead trials." The piece that Newman mentions is Adams 84[2] which has long reposed in the Connecticut State Library in Hartford, as part of the Joseph C. Mitchelson collection. I told Newman about the existence of this lead trial when he first became involved with the Study Group. According to Mrs. Arline G. Maver, the curator of the Library collections, he visted Hartford in 1966. The reasons why the Mitchelson impression does not resemble any of the Franklin Hoard lead trials are many and varied, but one of them is quite fundamental - the Mitchelson lead 1853 USAOG twenty dollar reverse impression never was west of Pennsylvania; the Franklin Hoard lead trials were made in California.

In 1908 or early 1909, Joseph C. Mitchelson, of Tariffville, Conn., obtained a set of four lead die trials of the USAOG, each of which was crudely cut into an octagonal shape. Besides the twenty dollar reverse mentioned, an obverse and reverse for the 1853 ten dollars was included, as was an obverse trial for a USAOG five dollars. All were uniface trial impressions from single dies. Edgar H. Adams described the discovery of these rarities in the May, 1909 issue of "The Numismatist." Subsequently, he listed them as his Nos. 84, 85,

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[2] pg. 105 "Pattern and Experimental Pieces of California, 1849-1853," Part IV of "Private Gold Coinage of California," Edgar H. Adams, Brooklyn, N.Y., 1913.

86, 87 and stated that "all (are) from dies which are now in the Philadelphia Mint cabinet."[3] Adams believed it probable that these dies (he said nothing about the impressions from them) were made in San Francisco and returned to Philadelphia. However, examination of the USAOG twenty dollar reverse impression refutes this innocent speculation. It is an impression from one of at least three matrices sunk from an original prototype in the Philadelphia Mint. All show parallel guide lines between the lines of lettering and a center dot, on the tablet. Before any of them was used to raise a hub, the shallow guide lines and center dots were removed by grinding or lapping, after which the recutting showing at left of 5 was likewise much weaker. When Newman looked at the Mitchelson lead piece he apparently did not notice that his "rice shaped raised lump under the right arm of the T of UNITED" was missing, and that he was looking at a matrix impression.

Adams illustrated the actual Mitchelson lead strike of the USAOG twenty dollar reverse in the May, 1909 issue of "The Numismatist." However, when his book was published in 1912-13, he illustrated No. 84 (in the "Pattern and Experimental Pieces" section) with a plaster cast taken from the USAOG twenty dollar reverse die in the Philadelphia Mint collection. In spite of the fact that the lead impression in Hartford has slowly deteriorated over the years, it is obvious that Adams made a serious mistake. The Mitchelson lead reverse trial and the positive he made from the die in "the Philadelphia Mint cabinet" are not the same. The die in Philadelphia fifty-five years ago was not used to strike the lead reverse in Hartford! A comparison of my greatly enlarged photo of the Mitchelson piece (USAOG-133) and the second plate of halftones in "Pattern and Experimental Pieces of California" quickly proves this point. The lead uniface trial, having lain face upwards for over half a century, has slowly corroded. The struck surface, because of numerous brushings to remove the lead carbonate deposit (which retards the rate of corrosive attack), has become rough and scaly looking. Even so, the guide lines and center dot are clearly visible, as are numerous defects both on various letters and the tablet frame lines. A glance at the Adams halftone shows none of these characteristics, but does reveal a remarkably clean and perfect looking USAOG reverse, befitting a plaster cast taken from a well preserved steel working die. The only defect even remotely discernible in the Adams illustration of № 84 is what appears to be a dent on the bottom tablet frame line under the F of CALIFORNIA. In addition, the die chip under the right arm of the T in UNITED is not visible. Finally, there is no sign of the die break at the right hand side of the tablet. What have we here? Could Adams have illustrated a working die compatible with the Franklin Hoard Group V gold coins?

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[3] ibid. Pages 105, 106.

Two matrices, apparently different than that used to strike the Mitchelson lead trial, are found together struck on a large (34mm) nickel alloy planchet with plain edge. This item first appeared in the Waldo C. Newcomer collection, his No. 2735; he paid $350. for it. Later, it was sold by B. M. Mehl to Wayte Raymond, and passed into the hands of F. C. C. Boyd, Abe Kosoff, Farouk, Hans Schulman, New Netherlands 1955, Louis Werner, G. S. Stephens, and Dr. Conway Bolt. It was purchased by me at the Bolt sale[4] (see USAOG-134). One of these two matrices (which one is hard to tell since both nickel impressions are weak and/or incomplete) is also known struck upon a very large (41mm) thick copper flan with plain edge. This matrix impression is in my collection (USAOG-125); it initially appeared in a S. K. Nagy consignment to the 1958 A.N.A. Convention sale. Both this copper trial and the "double reverse" Newcomer nickel trial show a light raised defect almost vertically between the F of OF and the first C of FRANCISCO (not visible on one side of the nickel piece) and a similar defect joining the bases of NI of CALIFORNIA. However, there are minor differences between the three impressions and I believe that the copper trial was made after the nickel one. One of the matrices was resurrected by some one either in the Mint or out of it, who altered it to read 1852, thus creating an unknown "pattern" reverse. This was accomplished by grinding down the matrix itself, removing most of the guide lines and imperfections, but leaving the center dot; the recutting at left of 5 remains as does a faint trace of the defect at F. C. The wrong size numeral 2 was used, that figure being heavily punched over the obliterated 3. Five impressions of this 1852 USAOG twenty dollar reverse are known, two in silver (Ford and Dr. Katz colls., ex Boyd and Raymond, Farouk); one in copper (USAOG-117); two in lead, in the Smithsonian (USAOG-108, 109). All can be traced to S. K. Nagy, the long time Philadelphia dealer who was intimate with Capt. John Hazeltine and William Idler, both of whom had access to Philadelphia Mint material.

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[4] Lot 1192, Stack's Dr. Conway H. Bolt coll. auction sale, April 21-23, 1966.

As I have said, the 1853 USAOG twenty dollar reverse die (illustrated by Adams) was in the Philadelphia Mint cabinet collection as late as 1912. A notebook, prepared by Adams for Julius Guttag, and containing additions and corrections to "Private Gold Coinage of California," is in my library. In it, Adams states that the dies for his Nos. 84 through 87 are "now in the Government collection at Washington." The Smithsonian Institution did receive numismatic material from the Philadelphia Mint in the early 1920's (about the time Adams made up his Guttag notebook), but no record of these dies can presently be found at the National Museum. The twenty dollar reverse die with the characteristics of the Franklin Hoard Group V reverse may still be in the Mint, unless it was destroyed in 1938 along with other old dies. Its rediscovery would be extremely interesting.

At the beginning of this section I outlined in summary form the steps alleged by Newman to have been used to fabricate the Garland (and related Franklin Hoard) coins. The second initial step described involved the use of ceramic or baked clay, the third step the use of centrifugally cast steel to make the actual dies from which the coins were first struck.

Both baked clay and cast steel lack the inherent qualities required for high quality transfer reproduction. Their basic composition prevents exact imitation of fine relief detail. The clay has a tendency to shrink when drying. Both have a tendency to shrink when cooling (the ceramic after baking, the steel after casting into the ceramic). This shrinkage is not always uniform and when quite fine detail is involved it is not difficult to find evidence of distortion. Paper currency manufacturers have long made geometric or engine turned patterns part of bank note designs. Many of these patterns are quite similar to that used upon the reverse of the 1853 USAOG twenty dollar coins. The purpose of these repeated ultra-fine designs on currency is to make their reproduction by counterfeiters difficult. Therefore, why would any forger select a coin to reproduce which had as part of its design these highly detailed patterns, and why would he select materials and methods totally unsuitable for the reproduction of even simpler designs?

Last September I wrote to the Bureau of the Mint[5] requesting information relative to the use of centrifugally cast steel dies for the striking of coins. I enclosed a photographic enlargement of the reverse of one of the Franklin Hoard coins and copies of pages 11 and 12 of the Newman Inquiry, the latter containing Newman's explanation of how the coins under discussion were fabricated. I asked "if they have developed precision steel casting to the extent that coins of the quality shown on the enclosed photo (geometric design and all) can be struck from a die so made." Replying to that question and others, Miss Eva Adams, Director of the Mint, wrote me a detailed letter dated October 18, 1966.[6] Part of Miss Adams' reply is as follows: "Although we are continually examining questioned U. S. coins, many of which are determined to be counterfeit, this office has not had occasion to examine a counterfeit coin known to have been struck from dies produced by the described precision casting technique. However, our information, obtained from government experts who were instrumental in the development of the process, indicates that the following is true concerning the method, as it might be applied to the manufacture of coinage dies, either genuine or counterfeit:

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[5] Letter, John J. Ford, Jr. to Miss Eva Adams, Director of the Mint, September 30, 1966 (Appendix item No.23).

> (1) The fineness of detail attainable by present methods of hubbing will not be equaled in dies produced by the casting method;

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[6] Letter, Miss Eva Adams, Director of the Mint to John J. Ford, Jr., October 18, 1966 (Appendix item No. 24).

(2) Each cast die would necessarily go back to the engraver for hand or mechanical work which would result in variations between dies which would be apparent to an expert examining the resulting coins.

Both points made by the government technicians for Miss Adams should be self explanatory. The first makes it crystal clear that coins struck from hubbed dies (the process not having essentially changed since 1853) cannot be equaled in quality by coins struck from dies produced by any method of casting. The second point emphatically states that every cast die must be retouched or retooled, which would result in variations between them, or between the fruit of a retouched or altered cast die and a known genuine coin. The reasons why each cast die would go back to the engraver for hand or mechanical work should be evident to any one who has examined a cast coin,[7] and it should be strongly emphasized that steel does not have the flow, ductile or plastic qualities of the metals commonly used for casting coins.

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[7] For an example of a cast coin (in a conventional metal commonly used for casting coins) see USAOG-115. This lead piece illustrates how the USAOG twenty dollar tablet reverse, with its twin panels showing engine turning, appears as a casting. The original of this ten-sided item appeared as lot 2018 in the 1958 A.N.A. Convention sale catalogue as part of a consignment by the late S. K. Nagy. The cast copy which I illustrate subsequently appeared in another public auction sale catalogue, where it sold for the remarkable price of $2,000. to a floor buyer.

Page 12: Newman takes note of the shrinkage problem when casting steel. "The shrinkage of steel in the casting produces a slight size differential which is unnoticeable unless measured by precision instrumentation." In her letter to me, Miss Adams also quotes this statement, and in doing so says that "one major reason for the coins' being distinguishable is frankly stated in the report."

Four or five years ago, I was concerned with the authentication of another Pioneer gold coin. At that time I was accused of selling a Norris, Grieg & Norris five dollars as genuine, after a well known dealer had condemned it as being a cast piece. In endeavoring to prove the coin a struck example, I sent it to Dr. Vladimir Clain-Stefanelli, curator of numismatics at the Smithsonian Institution. Dr. Stefanelli in turn sent the coin together with a specimen from the National Museum to the Federal Bureau of Investigation Laboratories. The FBI people individually photographed both coins to an identical degree of considerable enlargement on 8x10" sheets of black & white positive film. Care was taken to see that the coins were photographed within minutes of each other, with the camera, coins and lights in the same position for each photograph. Both sheets of film came from the same box, both were developed at the same time in the same tank of developer; equal care was taken that both sheets of film received identical treatment during the remaining steps of the processing. The finished positive photographs (or transparencies) were then superimposed and examined with the aid of a back-lighted ground glass viewer. I was told that the cast coin would be smaller in diameter than the struck one, the shrinkage being most perceptible about the periphery of the smaller specimen. Happily, no evidence of shrinkage was discernible, and subsequent X-ray fluorescence tests confirmed my original judgment. With this experience in mind, I had similar enlarged transparencies made of two Franklin Hoard coins and two regular USAOG pieces. USAOG-103 (Group IX-1, Franklin) and USAOG-126 (Group X-2, non-Franklin) were photographed on black & white positive film by Laurence Steur of the Medical Illustration Laboratory of the New York Veterans Administration Hospital (Exhibit Transparencies C-4a C-4b). Steur also photographed USAOG-124 (Group V-1, Franklin) and USAOG-130 (Group X-3, non-Franklin) on Ektachrome positive color film (Exhibit Transparencies C-5a, C-5b). Superimposition of these transparencies was quite revealing, as much information was gained concerning the possible methods of matrix composition, the make-up of dies from hubs, the relative depth of sunk dies, and even the alignment of dies in a press and collar fabrication. Last but not least, neither of the Franklin Hoard coins (in comparison with the control specimens) showed the slightest evidence of shrinkage. This is particularly significant in the light of the Newman allegations concerning how these coins were made. Clearly, the Newman process would involve not just nominal shrinkage (as would occur in the case of casting a coin in a metal commonly used for that purpose), but dual shrinkage of considerable total magnitude. His ceramic hubs would certainly shrink when dried and/or baked, and there could be a slight size discrepancy from the thickness of the separating medium. In addition to this shrinkage, there would be definite, measurable shrinkage of the cooling molten steel (as mentioned by Newman, and confirmed by Miss Adams). Since the Franklin Hoard coins display no signs of any shrinkage, the conclusion can only be that these pieces were struck from non-cast dies, and thus be presumed genuine.

Earlier I mentioned the Newman idea of how new type coin designs or other components could be fabricated. This was in connection with the unpublished obverse dies on five of the six lead trial pieces that I sent to St. Louis for examination nearly three years ago. There are numerous flaws in the six step process described by Newman on page 12-coin to wax (latex or plastic), wax (or whatever) to ceramic, ceramic to steel die, steel die to steel hub, steel hub to steel die, steel die to coin, even if one discounts the proven fallacies of his cast die theory. For instance, his concept of punching different letters or different numerals into a die, the working part of which is five steps removed from the prototype, would require sets of letter or numeral punches that would be compatible with the style and appearance of the letters and/or numerals already in the die. These are not available on the market, since the style of letters and numerals has changed during the last century, and even if they were, the correct size would be difficult to duplicate. Obviously, such punches would have to be made, another tedious and expensive, if not impossible, proposition under the circumstances. There are other faults in Newman's six step process, but it is unnecessary to pursue them, since the entire modus operandi is predicated upon his discredited cast die argument.

THE FRANKLIN HOARD COINS - WHYS AND WHEREFORES

Let us review, briefly, the events which led to the issuance of over two-and-one-half million twenty dollar gold coins, of the fineness of 900 parts gold per thousand, by the United States Assay Office of Gold in 1853.

Augustus Humbert first started operations as "United States Assayer" in San Francisco on the last day of January, 1851. This was almost four months to the day from the date of the Act of Congress that authorized his title and put him in business. He was in California to convert raw gold into a commodity that would bear the Federal government stamp (testifying to its standardized weight and fineness), have a fixed and accepted value, and which could and would be used as a medium of exchange. He was in California as "United States Assayer" to force the State Assay Office out of the "officially stamped" ingot or what amounted to the "money making" business. He was authorized to associate himself with an established and reputable private coiner and he chose Moffat & Co.

From the beginning, Humbert conducted a semi-official operation. He was operating what amounted to a provisional branch mint, on a highly irregular basis, under contract to a private concern. His coins, whatever their form, were officially called "ingots." These, as we know, bore the legend, UNITED STATES OF AMERICA, and the Collector of Customs in San Francisco, T. Butler King, was authorized to accept them for tariff payments. That the U. S. government was the issuing authority and accepted them for the payment of Customs Duties, testified to their official status. On the other hand, legal tender status was not explicitly granted to the Humbert issued "ingots" (i.e., coins)[1] as this would have subjected him to the rigors of the Assay Commission. What did Humbert have to do with the Assay Commission? The answer is simple. That group, whose operations were ordinarily of a perfunctory nature, would have tested the Humbert "ingots" and quickly found that they conflicted with Section 8 of the Act of January 18, 1837,[2] the law that revised and restated Mint operations and regulated United States coinage. Section 8 concerned itself with the standard for gold coins, and clearly specified what alloy could be used. The standard was 900 parts of gold per 1000; the alloy was to consist of copper and silver- "...provided that the silver do not exceed one half of the whole alloy." One half of the whole alloy was 50 parts of silver per 1000.

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[1] pg. 22, "The Moffat & Co. Issues, San Francisco, 1849-1853," Part II of "Private Gold Coinage of California," Edgar H. Adams, Brooklyn, N.Y., 1913.

[2] "SEC. 8 And be it further enacted, That the standard for both gol and silver coins of the United States shall hereafter be such, t of one thousand parts by weight, nine hundred shall be of pure metal, and one hundred of alloy; and the alloy of the silver coi shall be of copper; and the alloy of the gold coins shall be of copper and silver, provided that the silver do not exceed one ha of the whole alloy." (From) "Coinage Laws of the United States, 1792 to 1894, etc.," Government Printing Office, Washington, D.C 1894.

The law was in conflict with the realities of the situation. California gold, in its native or raw state, was heavily alloyed with silver. To conform to the Act of 1837, Humbert would have had to refine his gold, removing some of the silver. For a relatively long time, he tacitly ignored the law, and his "ingots" (or coins) circulated without legal tender status. The day of reckoning finally arrived, but Humbert did not give up without a struggle. An examination of the extensive historical materials furnished by Edgar H. Adams[3] from San Francisco newspapers of 1852-53 tells us what brought the era of "880," "884," and "887" fine Humbert issues to an end.

As of September 4, 1852, W. L. Hodge, Assistant Secretary of the Treasury, wrote T. Butler King, the Collector of Customs, Port of San Francisco, to the effect that USAOG "ingots" (whatever the description) would no longer be acceptable for tariff payments, pursuant to Act of Congress, August 13, 1852. The Treasury Department till then had been acting upon advice of counsel in the belief that the Humbert and USAOG issues were for all practical purposes U. S. coins, viz. bullion of standardized weight and fineness officially stamped by a government officer. The Act of Congress in question overrode this position without stated basis. Hodge promised early attention to the necessary substitute remedying the new situation, that of creating an official San Francisco branch mint. He also left a loophole: "In the meantime the Department will ascertain if any temporary ...circulating medium in California of the standard fineness agreeable to the above Act of Congress, ...may at least to some degree lessen the inconvenience arising from the present scarcity in California of the actual mint coinage." The problem placed in Humbert's lap was not concerned with the authority of the issuer, nor was there any question as to the value of the Humbert-USAOG "ingots." It was entirely one of alloy composition, as the Humbert-USAOG issues were slightly too low in their gold content and compensatorily too high in their silver content, to conform to the Act of 1837 which clearly specified 900/1000 gold fineness and no more than 50/1000 silver. Making gold of that fineness required parting acids (nitric and sulfuric) which were extremely difficult to obtain in California. Bringing acids overland was hazardous, when we consider the carboys of highly corrosive acid bumping and jostling in the covered wagons, thus presenting a danger of not only destruction of the wagon furnishings but possible agonizing death to the wagon inhabitants at every bump in the road. This, of course, is aside from the effects of a few bullets from hostile Indians. Bringing acids by ship around

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[3] pgs. 37-50, "The Moffat & Co. Issues, San Francisco, 1849-1853," Part II of "Private Gold Coinage of California", Edgar H. Adams, Brooklyn, N. Y., 1913.

Cape Horn was just as hazardous. Ship captains often flatly refused to accept acid carboys as cargo, both from the danger of deadly fumes building up in the holds and from the aforementioned dangers of spillage-- spillage from the ship's rolling and tossing-- spillage which might well result in shipwreck, so corrosive were the acids needed and so large the quantities.

Hodge's letter, published in the "San Francisco Herald," October 9, 1852, resulted in a mass meeting of merchants the same day. The proceedings of this meeting were published in full in the October 10th issue of the same paper. At the mass meeting ex-Governor Smith made a long speech reviewing the history of the situation and emphasizing the legal point that Treasury action hinged on (a) whether or not the "ingots" were official U. S. issues, (b) if they were of standard fineness. In connection with the "ingots" being official U. S. issues, he said that the original Treasury order authorizing "ingots" to be receivable in payment of tariffs would not have been legally authorizable unless the coins were legally acceptable at par. (The Sub-Treasury Act of 1846, Section 18, specified that customs duties were payable in gold, silver or Treasury Notes, the species of gold was not spelled out-- and I would add that during this period Bechtler was already in large scale operation, which may be one good reason that "gold" was not more explicitly described. The Appropriations Act for 1851 specifically authorized conversion of raw California gold into "ingots" whose value would be officially impressed by a government official, viz. the U. S. Assayer of Gold, Augustus Humbert. Ingots had to be of full declared value, otherwise they would not circulate.) In short, Smith adopted the view that the 8/31/52 act did not specifically forbid "ingots" (i.e., coins) per se. Customs collector T. Butler King pointed out that the difficulty lay solely in the divergence in alloy composition between Humbert's "ingots" and regular U. S. gold coin. He also said that he had recently been appointed Assistant Treasurer of the United States, and was thus wearing two hats as he retained his Collector of Customs office. As Assistant Treasurer, he was unable to deviate from Hodge's interpretation, but he offered to receive "ingots" for tariff payments temporarily, if he could do so without risking jail. Ex-Gov. Smith pointed out the inconsistency of the legal situation: the intent of the 1850 act was to make "ingots" a circulating medium, the act of 1846 failed to specify the kind of gold that was acceptable, yet Hodges, as Assistant Secretary of the Treasury, had declared the "ingots" unacceptable. King reiterated that only fineness under 900 was at issue. The upshot of the meeting was a memorial, signed by most of the local merchants and addressed to Secretary of the Treasury Thomas Corwin, pleading hardship and citing King's offer to receive ingots on his own.

At this juncture, as of October 12th, Humbert offered to make "ingots" at 900 fine, but declined to attempt to reduce the silver content of his issues to 50/1000. Not only was there an extreme shortage of parting acids, but there was also a serious shortage of copper. After October, 1852, almost no "ingots" were made of the lower fineness.[4]

Humbert was clearly treading a shaky legal tightrope. He quickly went along with the T. Butler King idea that the fineness of 900 was the prime issue, for wasn't the fineness clearly stamped upon his coins for all to see. However, as he spelled out in his letter, to the "San Francisco Herald," of October 12, 1852, he could not conform to the alloy requirements of Section 8 of the Act of January 18, 1837.[5] This being the case, it might only be a matter of time before King received a letter, or took it upon himself, to decide that he had to have full conformity with the law or else the Humbert "ingots" could not be used at the Custom House. Humbert knew that his coins, having a predominant silver alloy, were cold looking-- almost greenish in color, compared to the warm appearing, almost reddish color, of regular U. S. gold pieces. If he could come up with a composite alloy of gold and silver, with some copper, that would make his "ingots" more or less compatible in appearance to U. S. gold coins, he could, in effect, "have his cake and eat it too."

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[4] A very small number of ten and twenty dollar gold pieces were coined by the USAOG in 884 fineness early in 1853.

[5] "It is manifest that to conform strictly to this standard of the Mint, in all its points-- that is, to make the coin of a finenes of 900 thousandths of gold, and the 'alloy of not more than one-half silver, and the balance copper'-- would involve the necess of separating the silver from the gold and substituting copper. it is very evident that this long, tedious, and expensive proce cannot be adopted until the proper facilities are afforded by th branch of the Mint which is to be established in San Francisco, connected with which there must necessarily be refining and chemical works for the manufacture of acids."

While on a trip last fall, I purchased a copy of the Adams 1913 reference on Private Gold Coinage, and having nothing else to read on the plane home, I reread that section of Part II dealing with Humbert's problems. The more that I read, the more I thought of Franklin's handkerchief story alluding to alleged varying finenesses and alloy differences of the seven perfect prooflike and probably other twenty dollar coins from his find. The more that I thought about it, the more convinced I became, that most of the Franklin Hoard USAOG pieces had to be experimental strikings in various alloy combinations. Of course, I remembered being told that the original owner of this material had turned in $14,000. to $15,000. in gold coin, in 1933-34, and that those coins were mainly of twenty dollar denomination, and that all of them had been obtained by the family prior to 1862. The possibility existed that some of the impaired and handled prooflike coins that Franklin disposed of could have been USAOG coins of normal fineness, some of the experimental alloy pieces having become mixed up and exchanged with the coins turned in. Not knowing exactly what I would find out, I was determined to have tests made in order to ascertain just what these coins were made of. With this thought in mind, I contacted Dr. Vladimir Clain-Stefanelli at the Smithsonian, hoping that he could help me by having a non-destructive quantitative analysis made of sample coins at a government laboratory. After all, Dr. Stefanelli had such tests performed for me before, and there was also the question of cost. Unhappily, after an exchange of correspondence and a talk in New York City, Dr. Stefanelli advised me that he could not have tests made for me at an early date, if at all. Being forced to turn elsewhere, I contacted a friend at M.I.T. seeking an answer to my problem. He referred me to the Research Laboratory of the (Boston) Museum of Fine Arts. Speaking to the laboratory director on the telephone, I was advised that they could perform X-ray fluorescence tests for me, which would not harm the coins in any way. Knowing that their X-ray spectrograph was capable of providing an accurate quantitative analysis of the alloy of a coin to within one tenth of one per cent,[6] I sent them three representative coins from the Franklin Hoard. One of these was the perfect prooflike specimen from the Murrell-Clifford collections (USAOG-124). The other two coins were pieces Franklin had either sold on his own or had kept himself for a period of time before selling. The first of these he sold to Werner Amelingmeier, January 1, 1959, for $150. (USAOG-104); the second one was the best of the "impaired" prooflike strikes, that sold to Harry Forman, April 1963, for about $1,800. (USAOG-111). My sampling was certainly representative; I had a perfect prooflike coin (one of the seven), and I had examples of both the worse and nicest coins that Franklin had handled himself.

In sending the three Franklin Hoard coins to Boston I was prepared to find either similar compositions varying only minutely and randomly, testifying to a single melt, or--if the pieces were in fact experimental as I believed-- exact round numbered percentages such as 880, 890, 900, 910 gold. Early in May I received the test results, consisting of three signed certificates from the Museum of Fine Arts. There were no opinions given on these certificates, just the results of an analysis of each coin "by X-ray fluorescence to determine the percentage of gold and silver or copper in the alloy."[7] The test results were as follows:

	gold	silver	copper	trace(residual)elements	weight
USAOG-111	910	80	0	10	514.6(gra
USAOG-104	890	90	5 to 10	10 to 15	516.6 '
USAOG-124	880	85	30	5	516.0 '

It should be noted that the weights vary inversely with the amount of gold; the lightest one has gold of above

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[6] pg. 56, "Counterfeit, Mis-Struck, and Unofficial U. S. Coins," Don Taxay, New York, 1963.

[7] Certificates (3), Research Laboratory, Museum of Fine Arts, Boston, Mass., Museum Nos. T.L. 13,428, 13,429, 13,430, Examination Nos. 67.10, 67.11, 67.12, all dated May 5, 1967 (Appendix items, Nos. 25-27).

Federal standard fineness, the heaviest is a little low in gold content, exactly as would have been expected in fancy experimental productions. Of course, the test results for these three coins cannot begin to tell the story of USAOG experimentation, but they confirmed to me that most, if not all, of the Franklin Hoard USAOG twenty dollar coins, were experimental strikings in various alloy combinations.

If the above list were longer, with test results from many other coins, we would have a basis for evaluation that would better tell us Humbert's motives. As it is, we can assume that the alloy experiments began in October 1852; we know that they continued into 1853. We know that the systematic addition of small percentages of copper, and varying the proportions of gold and silver (by adding pure gold from a 999 Fine Proofing piece), would produce the desired mixtures for comparison. California gold, normally paler and more greenish than the eastern ores, could be altered in appearance only subtly by such fiddling around. Walter Breen has ventured the guess that alternatively, the very slight differences in appearance that can be made out might well have been useful for on-the-spot preliminary estimates of fineness of samples of coins brought in. If, as I suspect, the group of seven perfect prooflike coins represented part of a larger group comprising finenesses from, say, 850 to 950/1000, with varying proportions of copper alloy added to the normal silver, their purpose will be clear enough in this context. However, that supposition, as well as my earlier guess that Humbert strove for compatibility in appearance with regular U. S. gold coins, can only be held in abeyance until X-ray fluorescence studies have been made on the remaining perfect prooflike twenty dollar pieces and similar coins from the Franklin Hoard. For all we know, the unearthing of the long lost internal records and correspondence of the USAOG, particularly the letters exchanged between San Francisco and Philadelphia, might indicate a completely different reason for Humbert's experiments. The fact that the various Franklin Hoard USAOG coins were struck upon highly burnished planchets is significant. It might suggest that the experiments with different metal combinations resulted in badly discolored or streaked flans, which required extensive polishing for a degree of uniformity in appearance. Or, more likely, groups of these prooflike coins were prepared for T. Butler King and other officials, to illustrate the similarity of appearance produced by such manipulations.

While awaiting the results of the Museum of Fine Arts tests, I asked Harvey Stack if he could make arrangements for additional X-ray fluorescence tests. He eventually did so, and told me that I could have eight or ten coins tested. I particularly wanted to know the composition of the remaining six perfect prooflike pieces, and in this regard asked for the Garland, Kagin and Sloss examples. The Garland coin was not available, being the subject of other studies. The Kagin coin was sent to me by Newman on July 28th, far too late for any kind of laboratory work. Dr. Sloss simply ignored the request to send his coin for alloy determination. These actions indicated to me that the Study Group members were clearly afraid of any data prejudicial to their conclusions arrived at long ago.

The irrefutable evidence that the Franklin Hoard USAOG coins constitute experimental alloy trials substantiates my earlier contention that Fuld and Newman misinterpreted the Fuld X-ray diffraction tests. In the face of the Museum of Fine Arts tests the claim that the Franklin Hoard USAOG twenty dollar coins are forgeries becomes totally preposterous. Are we to believe that a forger would have made separate melts with exactly calculated alloy percentage compositions, not detectably different, for each of several prooflike coins? How would such a person have known to predict different alloys? (Where did he do such work? Why did he do it?)

There is much additional collaborative evidence that all of the Franklin Hoard material is authentic and originated in 1852-53. For instance, I have a $44.77 essai coin ingot with an A. HUMBERT U.S. ASSAY obverse (see my TG-117). This is "F-1" of the three different "tight target" obverses, which I call F-1, F-2, F-3. The use of U.S. ASSAY (without the -ER) is found in but one other place. That is on the reverse of an

1852 ten dollars, 884 THOUS., copper pattern. This unique and unpublished coin, unknown to Adams, is in the Johns Hopkins University collection, and was only brought to my attention in recent months. Perhaps a better case in point is the badly rusted die that Franklin obtained for me in 1958 (my D-105), earlier mentioned, and two related items. The die was brought to me so badly rusted and corroded that in order to read it I had to soak it in a rust removing solvent. It is still severely rusted, so much so as to prevent any impression of any kind to be taken from it, even if I believed the die would remain unbroken if so used. The only known impression from this die is found overstruck upon the obverse of an 1852 large cent. It is muled with the conventional USAOG twenty dollar obverse, apparently not yet in Group IX condition (USAOG-121). As the cent overstrike shows an impression of this identical die in unrusted condition, and is heavily patinated, clearly it was made earlier. Franklin obtained the overstruck cent while on a trip to Arizona, June 29 - July 27, 1959. He gave it to me as a gift upon his return. About a year earlier, while on a similar trip, Franklin obtained a rubbing of a $38.00 ingot of ARGIENTI / & Co. / BANKERS. This piece was dated 1851 and bore a logotype die stamp reading SHULTZ & CO / ASSAYER in small letters. It was validated by being counterstamped by two USAOG die stamps, one of them of the four line tablet type, the other from a logotype reading A. HUMBERT / U.S. ASSAYER (my TG-132, USAOG-129). Both USAOG overstrikes obscured pertinent components of the original ingot, one of them covering ARGIof ARGIENTI, the other half of the four numeral denomination stamp. In spite of the value of this highly important piece being seriously compromised by the two validation stamps, I asked Franklin to obtain it, which he did while on the 1959 trip mentioned, and he sold it to me at the same time that I obtained the cent overstrike.

Adams, in discussing the operations of Shultz & Co., reproduces a biographical sketch of William Thompson Garratt, who was Judge Shultz's partner.[8] In both the published sketch and in a dictated statement, Garratt states that he and Shultz coined for Argienti & Co., bankers, and that they made a great many dies for other private coiners. He is also quoted as saying that Albert Kuner engraved the dies made in the Shultz & Co. foundry, and that he was responsible for the turning or machine work on them.[9] Therefore, we can safely say that Kuner was the engraver of the dies used to make the Argienti ingot, and that he made the SHULTZ & CO / ASSAYER logotype die stamp found on the reverse of that ingot.

Examination of the cent overstrike just mentioned reveals that the small letters punched into its 1852 reverse are identical to those of the SHULTZ & CO logotype and the "tight target" USAOG obverses. Small letters on the die of the cent overstrike include U, E, Y, S and R, with peculiarities enabling immediate identification: flat base on U, upper left serif of E and of Y missing (punches chipped), R with vertical tail placed well to r. and with very small tight upward curl, S with peculiar serifs. These letters are also found on both the Shultz logotype and my obverse dies F-1, F-2, F-3. Large letters on the 1852 reverse die of the cent overstrike (MOFFAT & CO.) include peculiarities on M, O, T, C and the ampersand identical to those found on ARGIENTI & Co. BANKERS and S.M.V. DOLLARS, etc. on the Argienti ingot. Easily recognized is the square chip out of the upper left corner of the T.

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[8] pg. 75, "Various Californian Private Mints, 1849-1855," Part II of "Private Gold Coinage of California," Edgar H. Adams, Brookl N.Y., 1913. (From) "Builders of a Great City," San Francisco Journal of Commerce Publishing Co., S.F., 1891, Vol. I.

[9] ibid. Pages 75, 76.

Equally careful examination of the (1853) A. HUMBERT two line logotype die stamp reveals that the same identical small letter punches were used to make it, as were used earlier (via the SHULTZ & CO logotype) on the 1851 Argienti ingot, subsequently to make the 1852 "MOFFAT & Co." reverse, and still later to make up the three different "tight target" obverses, F-1, F-2, F-3. Not only was the identical alphabet of letter punches used, but the A. HUMBERT validation stamp tells us that some of them were replaced: the A, H, M, B, remain the same, but the U, E, Y, S and R, have been replaced by differ letters not defective. This is, as would be expected, new letter punches being made to replace defective ones, non-defective ones remaining in use.

Adams makes it clear that Kuner earlier (1849-50) did work for Moffat & Co.,[10] making him the logical local source of letter and numeral punches and dies for both Humbert and the USAOG. Further study of the rich historical source material provided by Edgar H. Adams suggests that the badly rusted "MOFFAT & Co." reverse die dated 1852 was made early in that year, probably simultaneously with the dies for the Moffat 1852 ten dollars, 264 GRS., which does not bear Humbert's name on the reverse, but which does have the eagle design used by Augustus Humbert on pieces of different denominations. Additional reading and analytic study indicates that the "tight target" obverse dies (see USAOG-132) were prepared in San Francisco late in the summer of 1852. There was a definite need for an ingot design minimizing the number of new denominational dies that would be required, as well as for one suitable for both alloy combinations and coins of the twenty dollar denomination (see my TG-118 and #1 of 9/2/66, as well as the piece in the Lilly collection). The last Humbert (1852/1) twenty dollar coin was struck on April 2, 1852[11] (AH-100), and obviously the hubs for the 1853 USAOG twenty dollar coins did not arrive until late in the year. Confirmation that the F-1, F-2, F-3 obverses were made in August or September 1852, is established by the fact that the USAOG issued bars commencing in October 1852 ($300,275.21 worth)[11] and we know that t "tight target" type obverse was subsequently used on suc bars since at least one survives (see my TG-119, a $83.7 bar bearing a serial number).

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[10] ibid. Page 94.

[11] See monthly reports of A. Humbert, U. S. Assayer, and the United States Assay Office of Gold; (National Archives: Records of the Bureau of the Mint, Record Group 104, Treasury Section.)

With the correct chronological progression o the 1851 SHULTZ & CO logotype, the (early) 1852 "MOFFAT Co." reverse, and the (later 1852-53) "tight target" ob clearly defined historically, we find that their punch- to the (1853) A. HUMBERT two line logotype die stamp ma sense. With such progression confirmed by the replacem five defective Kuner letter punches on the A. HUMBERT the cry of "forgery" sounds even more ludicrous and ri than before.

The only logical choice of an individual wh access to government hubs, or to dies made from them, and simultaneously dies, logotypes and punches by Albe would be Augustus Humbert or one of his employees. D of the parts of four old Kuner alphabets would be imp Creating extreme rust on an old die or ancient patina overstrike in a very short time would be almost equal No counterfeiter in his right mind would waste time t manufacture, at inconceivable expense in research and obscure material like a SHULTZ & CO logotype, stampin an ARGIENTI & Co. ingot (itself made with enormous difficulty and expense), and then ruining his own handiwork by twice stamping it (in the worse possible places) with two different (again fabricated with great difficulty) USAOG die stamps. The ad hoc assumptions required to sustain any such notion as that a forger made all of the two dozen or more hubs, dies, puncheons, alphabets, logotypes, collars and similar items, required for the Franklin Hoard material that I either now own or have handled, are too farfetched to remain this side of lunacy. The necessary amounts of time, effort, research, planning, material and costs, not to mention the difficulty in producing many pieces in different precise alloys requiring different melts of gold and silver, are stupendous in the extreme. We are asked to believe that all this was done in a short period of time. We are asked to believe that it was done for comparatively trivial amounts of money-- as a practical joke without unusual financial rewards being anticipated. It would be easy to demonstrate that the total amount made from the sale of all of the Franklin Hoard material, from coins to proofing pieces, by the supposed forger, would not begin to cover the expenses required for doing the necessary research, assembling the materials,making the hubs, dies and collars, creating the alphabets if he had not managed to discover original sets of punches (recorded as having been destroyed by fire in 1906, making the dozen or fifteen different meltings of gold alloys, and otherwise creating these obscure items.

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[11] See monthly reports of A. Humbert, U. S. Assayer, United States Assay Office of Gold; (National Arch Records of the Bureau of the Mint, Record Group 10 Treasury Section.) See footnote previous page.

We are asked to believe all the above profusion of equipment, of research, of manufacturing difficulty. We are asked to believe that mint facilities were available for melting and refining, drawing and rolling, cutting and stamping, not to speak of coining presses capable of hubbing steel dies. We are asked to believe that one man did all this undetected, and while doing so, managed to completely fool and deceive the author of this document.

If the Garland owned perfect prooflike example is false, then all of the coins, essais, ingots, experimental, trial and proofing pieces, linked to that coin by punch or die impression, much less source, are all, without exception, also false. There is no alternative: either all, including the Argienti ingot and the 1852 Moffat die, are fraudulent, made at unimaginable costs and difficulties, or else they are genuine. If false, the amount of additional explanation required is immense. If genuine, they are all readily explainable without introducing ad hoc assumptions.

I thought the Franklin Hoard items genuine as I obtained each one in turn and studied it. My records and research of the past ten years, and, most particularly, my work of the past few months, only confirms that consistently held opinion.

In closing, I would like to thank Walter Breen for his tremendous help in checking my conclusions and for independently studying the Franklin Hoard material in its entirety. I would also like to thank Harvey Stack for his continued assistance and, last but not least, Larry Steur, of the Medical Illustration section of the New York City VA hospital, for his magnificent photographic work.

John J. Ford, Jr.

August 1967

APPENDIX

	ITEM
Letter, C. F. Willis, State Secretary of the A.S.M.O.A. to Paul Franklin, Oct. 23, 1953.	1
A typical Paul Franklin advertisement, circa 1953, possibly in "Pay Dirt".	2
The third and latest (1966) printing of the illustrated circular on numismatic bars and ingots used by Paul Franklin.	3
Letters (4): F. Korff, Mesa, Arizona, to Paul Franklin, regarding Blake & Agnell and Blake & Co. items, September, Oct. 18, 1953; S. Skaar, Nevada City, California, to Paul Franklin, regarding J. J. Ott assay bars, n.d., circa 1954-55; Paul Franklin to John J. Ford, Jr., regarding B. Baxter & Co. gold assay bars, November 9, 1952.	4 - 7
The last known resident address of the owner and source of the USAOG material is likewise given only on the copies of this report prepared for the members of the Arbitration Panel. An effort has been made to ascertain the present whereabouts of the owner and source of the USAOG Hoard items. Evidence of this search is confirmed by a letter to John J. Ford, Jr. from attorney Laurence Rosenthal of Strasser, Spiegelberg, Fried & Frank, regarding a call from attorney George P. Vlassis of Brown, Vlassis & Bain, of Phoenix, Arizona, dated June 26, 1967, and by a letter to Mr. Rosenthal from Mr. Vlassis, dated July 25, 1967.	8 - 9
Letter, George J. Fuld to Werner Amelingmeier, September 30, 1964.	10
Newspaper clipping, "Numismatic Garlands" by Paul E. Garland, pg. 2, "Blue Ridge Coin News," November, 1964.	11
Letter, John J. Ford, Jr. to Eric P. Newman, October 11, 1964.	12
Letter, Paul Franklin to John J. Ford, Jr. (first two pages), November 23, 1964.	13
Letter, John J. Ford, Jr. to Eric P. Newman, December 3, 1964.	14
Letter, with listing, Walter Breen, Institute of Numismatic Authenticators, to John J. Ford, Jr., February 13, 1967.	15

Letters, Prof. Robert S. Woodbury to John J. Ford, Jr., December 2nd and 8th, 1966. 16 - 17

Letter, Prof. Robert S. Woodbury to John J. Ford, Jr., January 30, 1967. 18

Letter, G. P. Dyer, Royal Mint, London, to John J. Ford, Jr., February 16, 1967. 19

Letter, Theodore L. Craige to John J. Ford, Jr., July 15, 1967 20

In back-reflection measurements, particularly with the strongly absorbed long-wavelength X-rays commonly used, the resulting information is largely confined to the surface properties of the sample." (From) "X-Ray Studies of Materials, A. Guinier and D. L. Dexter, New York & London, 1963". 21

ibid. Page 101: "...if the sample were composed of rather large grains so that the lines are punctuated, it would be impossible to determine the position of maximum intensity of the ring with the required precision". 22

Letter, John J. Ford, Jr. to Miss Eva Adams, Director of the Mint, September 30, 1966. 23

Letter, Miss Eva Adams, Director of the Mint to John J. Ford, Jr., October 18, 1966. 24

Certificates (3), Research Laboratory, Museum of Fine Arts, Boston, Mass., Museum Nos. T.L. 13,428, 13,429, 13,430, Examination Nos. 67.10, 67.11, 67.12, all dated May 5, 1967. 25 - 27

June 21, 2011

ERIC

Because of your previous interest in fake ingots, I wanted to make sure you saw this article from the June 20th issue of Coin World.

BUNNY

Coin World 6-20-11

Heritage pulls two fake silver ingots from Long Beach sale

Researcher says computer may have been used to design ingots

BY MICHELE ORZANO *COIN WORLD STAFF*

Two undated San Francisco Mint silver ingots have been determined to be fakes and were withdrawn from the June 2 to 5 Long Beach Signature U.S. Coin Auction by Heritage Auction Galleries.

Both ingots — one weighing 5.50 ounces and the other weighing 6.99 ounces — have an oval punch on both sides. Within the oval is an American eagle with wings outstretched and the text MINT OF THE UNITED STATES AT SAN FRANCISCO. Below the oval are the inscriptions 999.5 FINE and the weight.

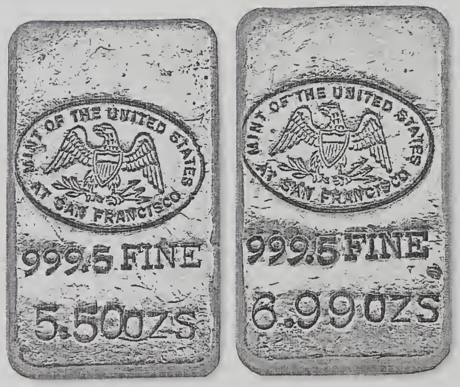
Mark Van Winkle, chief cataloger at Heritage, said the ingots have been returned to the consignor. He declined to name the consignor.

Van Winkle said he'd "never come across" one of the fake ingots before.

"It's hard to be alert 100 percent of the time," Van Winkle said regarding spotting the fake. He said collectors interested in ingots or any other collectible need to know what they are looking at before they buy.

Van Winkle said a client of Fred Holabird, a gold mining geologist by trade and partner of Holabird-Kagin Americana in Reno, Nev., a Western Americana collectibles auction firm, spotted the ingots in the auction and called Holabird to verify their authenticity.

Holabird is widely recognized as an expert in pioneer gold and silver ingots and other artifacts from early Western mines.


MINT OF THE UNITED STATES AT SAN FRANCISCO
999.5 FINE
5.50ZS
MINT OF THE UNITED STATES AT SAN FRANCISCO
999.5 FINE
6.99OZS

Images courtesy of HeritageAuctions.com.

Images depict the face side of the two fake silver ingots withdrawn from the June 2 to 5 Long Beach Signature U.S. Coin Auction by Heritage Auction Galleries. The back designs are the same as the face designs.

Holabird said he identified the ingots as suspected fakes and alerted Heritage.

He said the ingot designs look like they were computer-generated, a technique he had not seen used in the production of fake ingots before.

When asked what would stop the consignor from selling the ingots in another auction, Van Winkle said, "nothing, but we can't be the policeman of the world."

Waves of fake ingots

These are not the first fake silver ingots discovered in the market.

A story published in the March 29, 2010, issue of *Coin World* discussed fantasy silver ingots, purportedly made by Wells Fargo & Co. in the 19th century, that were entering the U.S. market from Asia. Some of the fake ingots were being offered accompanied by genuine, original historical documents.

Fantasy ingots attributed to Wells Fargo are not new. The first wave started appearing in 1960, according to Holabird, who alerted the hobby about the fakes surfacing in 2010. The 1960 pieces were cast with all of the inscriptions part of the mold. The elements appearing on genuine pieces would have been punched into the ingots by hand.

A second wave of Wells Fargo ingots appeared maybe 10 years or so ago, Holabird said, in eBay auctions. These pieces were more advanced than the 1960 wave of ingots, in having all of the elements punched with individual letter and number punches.

The fake ingots that surfaced in 2010 showed another slight advance in production, according to Holabird. Gang punches were used in applying the inscriptions to this generation of ingot, he said.

No Wells Fargo ingots have been conclusively authenticated. Henry Wells and William Fargo founded Wells Fargo in 1852 in San Francisco, then the heart of the gold rush region. The name Wells Fargo, one of the most famous names out of the old West, has been placed on all sorts of memorabilia, including fantasy ingots. ■